

UTAH BIG GAME ANNUAL REPORT

1997

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Annual Performance Report for Federal Aid Project W-65-RD-45

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DIVISION OF WILDLIFE RESOURCES

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ANNUAL PERFORMANCE REPORT

BIG GAME INVESTIGATIONS AND MANAGEMENT RECOMMENDATIONS

State: U T A H

Grant Title: Statewide Wildlife Management Investigation and Survey

Project No: W-65-RD

Sebment: 45

Project Title: Big Game Harvest, Range and Population
Trend and Movement Study

P.S. Objective: To annually determine harvest, harvest composition, sex and age composition of populations, population trends, movements and seasonal distribution of Utah's big game herds and annual condition and utilization of big game ranges; to use the above information to develop herd unit management plans for each of the eight big game species and develop annual management strategy recommendations to achieve management plan objectives.

Segment Objectives:

1. Determination annual harvests.
2. Determination of sex and age composition of harvest.
3. Determination of sex and age composition of populations.
4. Determination of population trends.
5. Determination of big game movements and seasonal distribution.
6. Determination of annual range condition and utilization.
7. Species plans.

Abstract: Annual information pertaining to Utah's big game herds was gathered and is presented.

In addition to current data, all information collected for several years is compiled, allowing the maximum benefit to be obtained from trend studies. Data and information collected prior to this time can be found in previous Big Game Annual Report publications.

Harvest and hunting pressure trends are presented for each of the deer, elk, pronghorn, moose, bighorn, bison and mountain goat herd units.

Other investigative studies conducted to aid in the completion of the management program include ocular range studies, browse enclosure evaluations, permanent vegetative trend plots, game-counting trend studies, preseason, postseason and limited spring classification counts, pellet group transect studies, classification of harvest and highway mortalities.

Location: Statewide

Total Cost: \$

I.

INTRODUCTION

This report contains a summary of big game population monitoring efforts. A complete summary of all data prior to 1951 can be found in the 1952 Big Game Investigations and Management Recommendations book (Big Game handbook), and at least a 5-year trend of data is include in each of the succeeding Big Game Handbooks.

The 1997 Big Game Annual Report includes the 1996 Big Game Harvest summary and the Big Game Investigations and Management Recommendations data. General condition write-ups and management recommendations are given to the Board of Big Game Control in a separate report..

BIG GAME HARVEST SUMMARY

The data concerning big game harvest and hunting pressure is obtained from a telephone survey and mailed questionnaires. This annual data creates a trend for each herd unit. These trends are extremely important in managing deer and elk to meet goals and objectives adopted by the Board of Big Game Control.

A brief summary of the history and management of each species is included at the beginning of each section.

MISCELLANEOUS

Highway mortality data are collected to assist in highway planning to help determine locations of crossing structures and needs for game-proof fencing. These mortality figures should be considered as a minimum, because some animals are removed from roadways without being recorded or get into cover before dying.

YEARLY SUMMARY OF REPORTED DEER HIGHWAY MORTALITY

Deer Herd Unit No.	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95*
1	69	71	141	23	116	
2	119	152	505	470	42	
3	94	136	153	108	76	
4	42	60	61	12	--	
5	395	175	256	279	112	
6	19	15	217	4	--	
7	38	36	48	40	20	
8	5	--	--	--	--	
9	350	139	225			
10	156	222	54			
11	142	73				
12	21	0				
13	10	0				
14	90	0				
15	32	0				
16A						
16B						
17	35	0			191	
18	92	0				
19	19	15	217			
20	38	36	48		217	
21	111	--				
22	25	9	43			
23	2	4	2			
24	5	--	--			
25	67	70	37			
26	42	25	27			
27	18	8	2			
28	0	2	2			
29	--	0				
30	10	0				90
31	113	6				9
32	192	128				2
33	--	18	--			23
34	--	60	--			
35	12	77	--			367
36	--	36	--			
37	101	139	--			
38	26	222	--			
39	96	73	--			1
40	33	0	--			
41	70	0	--		189	7
42	496	0	--		39	35
43	--	0	--		1	1
44					9	1
45					14	8
46	--	15	1		7	
47	--	36	--		82	20
48	--	--	--		156	3
49	--	43	--		2	6
50	--	2	--		34	26
51	--	58	--		43	5
52	--	37	--		6	7
53	--	27	--			
Total	3185	2230	2039	936	1356	609

Fiscal year - July 1 through June 30.

*Incomplete data

A. BIG GAME LICENSE SALES

The number of big game licenses sold increased steadily from 1949 through 1965. The deer harvest for the 1965 season was lower than it had been in the previous 14 years, and the number of control permits authorized had been declining since 1960. The combination of these two factors was the apparent cause of a slump in license sales for the 1966 license year. In 1967, cost of licenses was increased, and this caused a further decline in the number sold. From 1967 to 1973, however, there was a steady increase in sales. As availability of control permits decreased from the high in 1960, nonresident license sales decreased to a low in 1967. In about 1967, surrounding states began more extensive cutbacks in the number of control permits they were issuing, and this tended to direct more of the nonresident hunters back to Utah. Beginning with the 1973 season, the state Legislature limited nonresident hunters to 20,000. Because of the much more conservative hunts and complete lack of permits for extra deer, the actual sale of nonresident licenses has remained well below this quota. Resident permit sales declined during the 1974-76 years because of a decline in the deer population. Their numbers showed an increase in 1977 and 1978 paralleling an increase in deer numbers. License sales dropped slightly during 1979, probably due in part to the rising fuel prices.

Nonresident license sales increased to 9,629 in 1981 and resident license sales decreased 1,064 from 1980 sales, resulting in a net decrease of 696 licenses sold during 1981.

Nonresident license sales increased to 11,202 in 1982, an average of 1,573 licenses. Resident licenses increased 4,164 from 1981. There was a slight decrease in combination license sales, but sales of resident deer licenses increased by 4,476. The overall increase in license sales is probably a reflection of improving deer herds over most of the state.

Nonresident license sales increased to 14,543 in 1984 and to 17,184 in 1985. The slow but fairly steady increase from 1980 has been a result of improving deer herds in Southern Utah. Resident licenses decreased 22,936 from 1983. The large decrease in resident license sales can be attributed to forecasts of a slow deer hunt in the northern portion of the state and a major storm prior to and during the opening day of deer season.

License fees were increased 1985 to \$15 for a resident big game and \$35 for a combination license. Resident license sales continued to lag behind 1983 sales with a total of 178,657 licenses sold.

License sales decreased by nearly 10,000 in 1986. The decrease is likely due to a major storm the opening weekend. However, total license sales increased 3 percent in 1987 with nonresident licenses up by 11 percent. Because of increasing deer populations in 1988, license sales and hunters afield increased by 10 percent from 1987. Nonresident hunters increased 17 percent to 21,362. This was the first year since 1972 that nonresident license sales were more than 20,000. The number of nonresident licenses sold increased 10 percent in 1989 and 4 percent in 1990, while resident license sales decreased 3 percent and 1 percent respectively. In 1991, resident big game license sales increased 2 percent while nonresident licenses decreased 4 percent, resulting in net increase of 0.9 percent in total big game license sales.

Nonresident big game license sales declined 1.3 percent in 1992, the lowest since 1987, while resident license sales increased 1.3 percent. In 1993, license sales declined due to severe winter mortality widely shared among deer herd units through much of Utah, and the implementation of "choose-your-season" deer hunting.

In response to pressures from sportsman's groups in 1994 the Division implemented a cap of 97,000 on the number of general season buck deer permits available statewide. Each of the five regions had an allotted number of buck permits available for sale for each of the three general season hunts. This cap has remained in place through 1997.

Big Game License Sales and Deer hunters Afield

Year	Non Res. Number	Non Res. Percent	Resident Number	Resident Percent	Total License Sales	Total Hunters Afield
1951	5397	4	115400	96	120797	112911
1952	7895	6	117666	94	125561	115887
1953	10603	8	118092	92	128695	119958
1954	12379	9	121569	91	133948	123231
1955	15175	11	124498	89	139673	129303
1956	16472	12	126231	88	142703	133676
1957	18423	13	127550	87	145973	132797
1958	18539	12	133826	88	152365	141551
1959	22909	14	137502	86	160411	149908
1960	21931	14	139717	86	161648	150401
1961	25291	15	140478	85	154769	155037
1962	25482	15	149010	85	174492	163072
1963	24977	14	154003	86	178980	165531
1964	22793	13	157564	87	180357	169178
1965	22508	13	157368	87	180876	171466
1966	15963	9	158895	91	174858	161529
1967	14139	8	153175	92	167314	156404
1968	15069	9	157389	91	172458	161209
1969	16921	10	159845	90	176766	162265
1970	19591	10	172643	90	192234	178005
1971	25381	13	175585	87	200966	185105
1972	29139	14	184950	86	214089	197173
1973	19758	9	198298	91	218056	198726
1974	16160	8	188816	92	204976	187711
1975	12786	7	183645	93	196431	177056
1976	11593	6	170070	94	181663	169705
1977	12541	6	182489	94	195030	187752
1978	13359	7	190350	93	203709	193108
1979	13172	6	190048	94	203220	188067
1980	9261	5	191382	95	200643	186381
1981	9629	5	190318	95	199947	187598
1982	11202	5	194482	95	205684	193843
1983	13518	6	194943	94	208461	199375
1984	14543	8	172007	92	186550	162124
1985	17184	9	178657	91	195841	177484
1986	16353	9	169497	91	185850	167125
1987	18233	10	173274	90	191507	170475
1988	21362	10	189822	90	211184	188396
1989	23300	11	185073	89	208373	189494
1990	24317	12	183051	88	207368	189139
1991	23382	11	185827	89	209209	187259
1992	23072	11	188324	89	211396	190538
1993	14197	9	138903	91	153100	146727
1994	5871	6	86770	94	92641	86121
1995	5832	6	98501	94	104333	97462
1996	5550	5	104976	95	110526	103892

II. Deer

A. HISTORY OF DEER MANAGEMENT IN UTAH

The necessity of managing the area's wildlife was recognized as early as 1894, two years before Utah became a state. In that year, the branch of state government which would later evolve into the Division of Fish and Game was established. However, it was not until 1907 and 1908 that definite steps were taken to increase and protect the state's small deer herd. In 1907, the first license fees of \$1.00 were levied; and from 1908 through 1913, the season on deer was closed. In 1913, the Legislature enacted a "buck only" law; and from 1914 through 1950, this law remained in effect. However, as deer increased, game managers realized the need for an antlerless harvest in order to keep deer herds within a given range capacity. Through legislative action, the first removal of antlerless deer occurred in 1934 on four separate deer herd management units.

It was recognized in the early 30's that there was a need for small, individual units throughout the state to provide better and more intensive studies in deer management. Each deer herd provided unique problems; thus, management units were set up on a deer herd basis where possible.

From four deer herd management units in 1930, the number has increased continually through the years until we now have a statewide breakdown of 81 herd areas. The harvest proposals for each individual unit are annually recommended to the Board of Big Game Control. The Board consists of five persons representing the Utah Cattlemen's Association, Utah Woolgrowers Association, Utah Wildlife Federation and a public lands representative from the Region 4 U.S. Forest Service office. The Wildlife Resources director serves as a chairman. The Board sets season dates and number and sex of big game animals to be harvested from the management units.

The first year of either sex hunting (1951) brought out the extreme importance of hunter distribution under this type of harvest. It was so easy for hunters to take a deer of their choice near home that deer herds away from the metropolitan areas suffered from lack of hunting pressure. Hardest hit was the southern part of our state which, for years, had relied on nonresidents to accomplish desired harvest. However, with only one deer to offer, and a \$10.00 increase in the nonresident license fee, the number of out-of-state hunters dropped from 6,550 in 1950 to 5,397 in 1951.

To overcome hunter distribution problems, new regulations allowed two deer to be taken on each permit in some areas, and an addition antlerless deer during the regular season on others. Conditional hunts were introduced to remove the crop and range-damaging animals along the Wasatch Face.

The 1953 Fish and Game Code granted greater big game management authority to the Board of Big Game Control. The new regulations merely stated that the general deer season shall commence on Saturday nearest the 20th of October. This automatically allowed the taking of either sex deer on a regular license during early seasons, late seasons, short seasons, long seasons and even permits the taking of multiple deer on a regular license. Various types of hunts and season lengths have been used in attempting to solve various problems as they have become evident.

Hunter pressure has increased steadily over the years. This steady increase in hunters and liberal hunting regulations had, by the early 1960's, brought deer herds into better balance with forage resources. The Board of Big Game Control, acting on the recommendations of the Division of Wildlife Resources and other resource management agencies, began a systematic cutback in control permits and liberalized seasons at about this time. The high in second deer permits had been reached in 1961, when approximately 40,000 were issued. By 1966, this number had been reduced systematically to less than 4,000, and only exceeded that number two times between 1966 and 1975. In 1967, 4,492 were sold and 4,016 were sold in 1972. Since 1975, the general season has been buck only. Therefore, the only antlerless harvest since 1975 has been with control permits. The need for control permits will fluctuate with deer population levels on the various herd units and overall will likely increase as long as the basic season remains buck only. The 1974, there were no permits issued which would allow the taking of more than one deer per hunter; and in 1975, the only means of legally harvesting a second deer was with an archery permit during the special archery season. Again in 1976 and 1977, as in 1974, there was no provision for legally harvesting a second deer. It was possible to harvest two deer in 1978. A buck could be taken on the regular license or on a primitive weapons permit, and a hunter could draw for one control permit. From 1979 to 1985, it was possible to take two deer. A buck could be taken on the regular license or on a muzzle-loader permit. A second buck could be taken on an archery permit, or an antlerless deer could be taken on a control permit.

In 1986, the archery permit did not have a separate tag. A person could take one buck using his big game tag during the archery, general or muzzleloader seasons, but once the tag was used, the hunter was through hunting bucks for the year. A second deer could be taken only on a control permit. The same regulation was continued from 1987 to 1990. However, archers were allowed to take a deer of either sex from 1987 to 1990.

Concurrent with the reduction in control permits, the number of herd units with liberalized seasons also began a general decline. In 1961 and 1962, 28 herd units had seasons more liberal than the 11-day either sex season. By 1966, only 4 remained. The number increased to 20 in 1971, but dropped again to 4 in 1973. By 1974, the most liberal seasons in the state were those allowing the hunting of antlerless deer for either the last 7 or the first 3 days of the season. Since 1975, all areas of the state have been restricted to the hunting of buck

only except for a limited number of hunter's choice and antlerless control permits that were issued on specific areas. Regular season, postseason and preseason antlerless hunts using control permits have been authorized by the Board of Big Game Control to control the growth of herds when it has been necessary.

In 1987, the number of control permits sold increased 12 percent from 1986 and control hunt harvest increased 13 percent. Also, conditional hunts have been authorized in problem areas when the need arose. It was not necessary to have conditional hunts during 1982, 1983, 1984, 1986 or 1987. Only one hunt with 200 permits was needed on the Promontory area in 1985.

Since 1986, the Board of Big Game Control gave the Division of Wildlife Resources another management tool to be used in addition to the conditional hunts, but on a smaller basis. The Board authorized depredation hunter pool hunts where lists of prospective hunters, with unused deer and elk tags, are maintained and hunters are called from this pool to solve localized depredation problems. This procedure allows the Division to react immediately to these problems without having to advertise for a drawing.

In 1961, there had been no units with regulations more restrictive than the general 11-day either sex season. More restrictive hunts increased steadily from 1961 until 1969; then sharply increased in 1973, when 31 herd units had seasons more restrictive than the 11-day either sex season. Since 1974 all seasons have been more restrictive. Types of restrictive seasons have included hunts shortened to 5 days, a combination of 3 days either sex hunting followed by 8 days of buck only hunting, 4 days of buck only hunting followed by 7 days of either sex hunting, and a full season of buck only hunting. In 1980 and 1981, 3 units were closed to hunting and 12 and 14 units respectively, were restricted to 7 days of buck only hunting. During 1982, three units remained closed to hunting and the remainder of the state had an eleven day buck only hunt. In 1983, two units remained closed to hunting and one unit had limited entry hunting. In 1984, one unit remained closed to hunting and two units had limited entry hunting. The remainder of the state had an eleven-day buck only season. In 1985, only a portion of one unit was closed and five units had limited entry hunting. During 1986, a portion of one unit remained closed and the limited entry was increased to seven on portions or all of six herd units. Also, ten units were restricted to the taking of bucks with three or more points. In 1987, there were 8 limited entry units available. These units continued through 1989, and were discontinued in 1990.

Weather conditions during the hunting season may have a very significant effect on the outcome of the harvest. There seems to be a correlation between harvest magnitude and precipitation prior to and during the opening weekend of the season. This is very understandable since precipitation during this time period can regulate passableness of access roads and also create a difficult situation for hunting. Either, results in fewer hunter-deer encounters.

In 1988, weather was very mild, providing excellent opportunities for the hunter, but also allowing deer to be scattered and less vulnerable to the hunter. Nevertheless, 62,101 bucks were harvested for 33 percent hunter success.

The winter of 1988-89 resulted in the loss of many fawns during the later part of the season. In addition, drought conditions throughout the summer of 1989 affected most of the regions in the state. Consequently, production was significantly below normal in many of the herds and younger age classes of deer were less numerous throughout the state. Hot, dry weather was common for the 1989 deer hunt and harvest indicated a 17 percent decrease from 1988.

Drought conditions continued for the fifth year during 1990, nevertheless the buck harvest increased slightly during the general deer season. Antlerless control harvest declined 18 percent as a result of fewer permits authorized. Drought continued through 1991 and 1992 with negative effects on the deer populations throughout the state. The winter of 1992-93 was devastating to Utah's deer population, with losses as high as 60 percent.

In 1993, a "Choose-your-season" deer harvest strategy was implemented requiring hunters to choose a hunting season and respective weapon preference. The new strategy was in response to hunter's wishes to ease hunter crowding during the general rifle season and to improve buck numbers. Hunters were required to choose the archery, general, or muzzleloader season. Initial incentives in the way of a statewide 28 day archery season and extra day for muzzleloaders were meant to draw hunters out of the general deer hunting season. Throughout much of the state, the new harvest strategy was overshadowed by limited harvest success in the Northern, Northeastern and Central regions of the state. Deer numbers were drastically reduced in these regions due to 5-7 years of drought and the catastrophic winter of 1992-93. While the Southeastern and Southern regions also suffered severe weather and low hunter success, these areas more closely approached normal hunter success. Hunter success in certain Northern region units was in the single digits.

In response to significantly low deer populations caused by severe winter mortality in 1992-93, the Division capped general season buck deer permit sales at 97,000 total permits. "Choose-your-season" hunting remained in place which limited hunters to one buck deer season. Such low deer hunter numbers has not occurred in the Utah since the 1940's. The fall deer hunting experience in 1994 shows an improvement over the 1993 experience, as evidenced by generally higher harvest success rates and hunter comments referencing less "crowding" during the opening weekends. Although hunters are generally displeased with limited hunting opportunity, there seems to be general acceptance for the permit cap, and a hope for rapid deer herd recovery along with the idea of maintaining a less crowded hunting environment in the future.

Buck harvest declined slightly in 1995 from 1994 levels most likely due to a heavy “opening weekend” storm which caused hunters to leave the mountains earlier than normal. The 1996 buck harvest showed a 29 percent increase over 1995.

The 97,000 general season buck deer permit cap will remain in place through the 1997 hunt seasons.

Year	<u>General Seasons</u>			<u>Restricted/Control*</u>			<u>Total</u>		
	Bucks	Antlerless	Hunters Afield	Bucks	Antlerless	Hunters Afield	Bucks	Antlerless	Hunters Afield
1976	56640	--	185661	288	95	1789	56928	95	187450
1977	67164	--	205104	500	751	3657	67664	751	208761
1978	65142	--	212201	55	3085	4750	65197	3085	216951
1979	60755	--	213547	121	5387	8580	60876	5387	222127
1980	65444	--	208154		9796	14388	65444	9796	222542
Total	315145	0	1024667	964	19114	33164	316109	19114	1057831
1981	80627	--	211467		10182	13706	80627	10182	225173
1982	75065	--	222305	29	10890	15531	75094	10890	237836
1983	82552	--	228907		13164	16711	82552	13164	245618
1984	63044	--	193662		4233	5766	63044	4233	199428
1985	59045	--	210313	37	5171	6801	59082	5171	217114
Total	360333	0	1066654	66	43640	58515	360399	43640	1125169
1986	60610	--	193977	103	6371	8572	60713	6371	202549
1987	65969	953	200746	546	6807	9770	66515	7760	210516
1988	68125	1057	222372	378	21178	26313	68503	22235	248685
1989	57381	1169	208031	350	19473	27681	57731	20642	235712
1990	57220	1021	207241	1588	15954	24191	58808	16975	231432
Total	309305	4200	1032367	2965	69783	96527	312270	73983	1128894
1991	51415	1337	203625	1927	12197	19356	53342	13534	222981
1992	54804	1266	213937	1729	11866	14810	56533	13132	228747
1993	24763	2192	140701	1261	2104	5307	26024	4296	146008
1994	27699	--	86121	1528	699	3859	29227	699	89980
1995	24594	--	97823	1818	1418	5248	26412	1418	103071
Total	183275	4795	742207	8263	28284	48580	191538	33079	790787
1996	32939	28**	103892	1638	2554	5502	34577	2582	109394

*Includes limited entry, high country buck, control hunts, mitigation permits and PHU hunts.

**Taken on archery extended hunts

D. General Rifle and Control Harvest

Herd Unit	General Rifle Hunt				Control Harvest	Days Afield	Total Harvest		
	Bucks	Hunter Afield	Partic. Afield	Total Days Afield			Buck	Antlerless	Total
1 Box Elder									
A-	549	1793	62	6110			549	0	549
B-	791	2264	160	7707			791	0	791
C-	8	52	0	167			8	0	8
Total	1348		222	13984	72	183	1348	72	1420
2 Cache									
A-	647	1944	160	6526			647	0	647
B-	616	2900	279	9997			616	0	616
C-	417	1922	145	6630			417	0	417
Total	1680		584	23153	181	717	1680	181	1861
3 Ogden									
A-	260	1436	160	4750			260	0	260
B-	223	869	67	2870			223	0	223
Total	483		227	7620	0	0	483	0	483
4 Morgan S. Rich									
A-	447	1070	77	3898			447	0	447
B-	63	309	15	1060			63	0	63
C-	266	929	21	3237			266	0	266
Total	776		113	8195	161	450	776	161	937
5 East Canyon									
A-	505	1150	52	4224			505	0	505
B-	135	463	52	1667			135	0	135
Total	640		104	5891	108	649	640	108	748
6 Chalk Creek	571	796	46	5604	153	618	571	153	724
7 Kamas	464	1749	46	6294	43	75	464	43	507
8 North Slope	148	465	41	1747			148	0	148
9 Daggett	453	1364	14	4680			453	0	453
11 Vernal	775	1745	77	6314	73	206	775	73	848
12 South Slope	1196	3190	129	11840			1196	0	1196
13 Current Creek	872	2820	139	10129			872	0	872
14 Avintaquin	87	272	5	1055			87	0	87
15 Anthro Mtn	245	729	67	2974			245	0	245
16 Book Cliffs		closed							
A-							0	0	0
B-							0	0	0
Total							0	0	0
17 Salt Lake	77	340	5	1234			77	0	77
18 Heber	1196	4778	258	15490			1196	0	1196
19 Timpanogos	486	1742	184	6038			486	0	486
20 Heaston	477	1521	155	4959	18	53	477	18	495
21 Stansbury	331	1340	109	4560			331	0	331
22 NW Desert	111	482	29	1754			111	0	111
24 Tintic	553	1980	178	7085			553	0	553
25 N Nebo	700	2318	239	8821			700	0	700
26 S Nebo	604	1552	103	5190			604	0	604
27 Diamond Fork	750	2571	234	8829			750	0	750
28 NW Manti	846	2031	84	6752			846	0	846
29 SW Manti	459	1160	22	3691			459	0	459

Rifle Harvest continued

Herd Unit	General Rifle Hunt				Control Harvest	Days Afield	Total Harvest		
	Bucks	Hunter Afield	Partic. Afield	Total Days Afield			Buck	Antlerless	Total
30 NE Manti	654	1676	59	5516					
31 SE Manti	350	1079	30	3751			350	0	350
32 Range Creek	270	631	20	2227			270	0	270
33 Moab	467	1135	20	4061			467	0	467
35 Abajo Mtns	615	1325	11	4738	40	240	615	40	655
37 San Rafael	326	871	37	3256			326	0	326
38 Henry Mtns.							0	0	0
39 Oak Creek	86	344	0	206			86	0	86
40 W Desert	100	377	12	1438			100	0	100
41 Fillmore	1126	2801	91	10550			1126	0	1126
42 Salina	760	1809	62	6001			760	0	760
44 Boulder	769	1558	54	5528			769	0	769
45 Monroe	962	1962	67	6385	44	136	962	44	1006
46 Mt Dutton	278	561	26	1534			278	0	278
47 Panguitch	1341	2899	163	12011	18	68	1341	18	1359
48 Beaver	1070	2914	152	11394			1070	0	1070
49 SW Desert	68	181	26	672			68	0	68
50 Pine Valley									
A-	115	260	26	966			115	0	115
B-	924	2444	130	9007			924	0	924
Total	1039		156	9973	138	679	1039	138	1177
51 Zion	731	1681	110	6730			731	0	731
52 Paunsaugunt					132	275	0	132	132
53 Kaiparowits	25	58	6	213			25	0	25
Unknown	711	2189		7008			711	0	711
Grand Total	28076	80801	4516	287075	521	4349	28076	521	28597

Control Harvest does not include Mitigation Permits.

1. General Season Harvest

The general season harvest is defined as that part of the deer harvest taken with the general buck on tag during the archery, rifle or muzzleloader hunts. Those units varying from these seasons are detailed in C. Season Variations.

Harvest data for the 1996 general deer seasons was obtained from a telephone survey conducted by a private contractor located in Park City, Utah

A total of 109,394 general season buck permits were sold in 1996. From this total, a random sample of 28,951 (26.2%) license holders were interviewed regarding their deer hunting activity for 1996. The results of the useable completed interviews indicated 5,688 license holders did not hunt during the general seasons.

A projection factor was obtained by dividing the total licenses sold in each region by the completed successful interviews for that region (see table 1.b.1 for a listing). These projection factors were used to project the total number of hunters and total harvest for the three general seasons on all deer herd units except the limited entry hunting units. The limited entry units were sampled by a separate mailed questionnaire.

Archery and Muzzleloader deer hunters were also sampled in conjunction with the general deer harvest telephone survey.

The general archery season occurred August 19 through September 8. The general deer season (any legal weapon) occurred October 21 through 29, and the general muzzleloader season occurred November 1 through November 9.

a. Confidence Intervals on Statewide Harvest 1996

To determine the confidence interval for the results of the above calculations, the following basic formulas were used:

1. P, the sample mean is n/N where n is the number of successes and N is the sample size. $P=8882/28951 = 0.30679$
2. S, the sample standard deviation, is $= \frac{P(1-P)^{(1/2)}}{N}$
3. The confidence interval for P, the proportions of success, is:

$$P \pm 1.96 @S @ \frac{(Np-N)^{1/2}}{Np-1} \quad \text{where} \quad \frac{(Np-N)^{(1/2)}}{Np-1}$$

is the correction factor for sampling without replacement from a finite population of Np (the projection of hunters afield).

Confidence limits on PT:

$$=0.30679 \pm 1.96 \frac{(0.30679(1-0.30679))^{1/2}}{28951} @ \frac{(103892-28951)^{(1/2)}}{103892-1}$$

$$=0.30679 \pm 0.004512$$

Confidence interval for total (buck) kill (Tb):

$$32,233 \pm (0.004512) (103,892) = \underline{32,233 \pm 469}$$

The proceeding analysis of the telephone survey indicated a statistically sound sampling of big game hunters. By collecting the survey data by management units, the percent success was calculated for each unit. If the number of interviews per individual unit are high enough, it is possible to make a statistically valid computation of the number of hunters afield in each unit and the total deer harvested in the unit. When the total number of interviews indicating a person hunted (28,951) was divided into the total hunter afield (103,892) a statewide projection factor of 3.5885 is obtained. This means that each interview represents 3.5885 hunters in the population. By multiplying the number of hunters interviewed for each unit by the projection factor for that region (see table 1.a.1), the number of hunters afield per unit was determined.

Table 1.a.1

Region	Archery Hunt Proj. Factor	Rifle Hunt Proj. Factor	Muzzleloader Hunt Proj. Factor
Northern	3.8488	5.1645	3.5726
North-Eastern	3.1255	5.1621	2.8030
Central	3.3017	5.7528	2.5742
South-Eastern	3.0398	2.1731	2.7879
Southern	2.8263	3.2524	3.8141

b. Season Variations

(1) **Limited Entry**

Nine areas were set aside as limited entry hunts in 1996. A limited entry buck permit allowed for the taking of one buck on that area during a specified season. Applicants were required to specify their choice of hunting seasons - rifle, archery, or muzzleloader. The permittee could only hunt that particular unit for that season. A person who was successful in obtaining a Utah limited entry buck permit in 1996 may not apply for a limited entry permit again until 1999. The figures below include rifle, archery and muzzleloader season harvest data.

Table 1. Limited Entry Deer Harvest, 1996.

Herd Unit	Permits Issued	Hunters Afield	Hunter Days	Buck Harvest	% Success
Diamond Mtn. (11) Rifle	96	93	274	77	80.2%
Archery	34	34	193	26	76.5%
Muzzleloader	34	30	106	30	88.2%
Vernon (23) Rifle	275	272	1066	183	66.5%
Archery	61	51	299	22	36.1%
Muzzleloader	44	36	160	18	40.9%
Dolores Triangle (34) Rifle	28	28	168	23	82.1%
Muzzleloader	55	49	211	32	58.2%
Elk Ridge (36) Rifle	173	173	971	116	67.1%
Archery	55	53	330	48	87.3%
Muzzleloader	44	44	212	44	100.0%
Oak Creek (39) Rifle	44	44	192	21	47.7%
Archery	5	5	21	1	20.0%
Muzzleloader	5	5	8	3	60.0%
Thousand Lakes(43) Rifle	33	33	145	26	78.8%
Archery	22	22	195	6	27.3%
Muzzleloader	22	22	116	14	63.6%
Comanche Canyon (50) Rifle	11	11	46	6	54.5%
Archery	11	11	77	4	36.4%
Muzzleloader	11	8	50	0	0.0%
Browse (50) Rifle	17	17	70	5	29.4%
Paunsaugunt (52) Rifle	194	188	1100	164	84.5%
Archery	66	66	910	47	71.2%
Muzzleloader	61	61	376	41	67.2%
GRAND TOTAL	1401	1356	7296	957	68.3%

(2). **High Country Buck Harvest - 1996**

This type of hunt was designed to provide the permittee with a unique quality hunting experience. A person may only make application for, or possess one (1) high country buck permit. There is a two year waiting period for successful applicants. A permittee was not allowed to take a deer during the general season.

Table 2. High Country Buck Harvest, 1996.

HERD UNIT (#)	# PERMITS AUTH.	# PERMITS SOLD	HUNTERS AFIELD	HUNTER DAYS	BUCK HARVEST	% SUCCESS
Crawford Mtn. (02)	33	33	33	144	30	91%
Kamas (07)	28	28	28	270	25	89%
North Slope (08)	220	220	201	1201	104	52%
Boulder Top (44)	28	28	26	72	12	46%
Pine Valley (50)	11	11	11	62	0	0%
GRAND TOTAL	320	320	299	1749	171	57%

(5). CONTROL HUNTS, 1996

(a) General Season Antlerless Harvest

Antlerless control permits were authorized on 23 units during the general deer season in 1996. The following data were calculated from a mailed questionnaire to all permittees. A sample of 652 (55%) of the 1,185 permittees returned the questionnaires which were used to estimate harvest.

Herd Unit (Unit Number)	Permits Authorized	Tags Afield	Hunters Afield	Hunter Days	Antlerless Harvest
Box Elder (01)					
Park Valley*(pre)	20	20	10	49	17
Snowville	40	35	35	58	29
Cache, (02)					
Logan-Millville(pre)-B	50	38	38	200	18
Crawford Mtn.(post)-C	40	35	35	47	35
Bear River Bottoms	100	70	70	409	42
East Bear Lake East	40	38	38	61	37
Morgan-Rich, (04)					
Morgan-Rich South	55	54	54	181	39
East Canyon, (5)					
South Davis*(post)-B	125	113	113	419	54
North Salt Lake(post)-B	50	47	47	172	26
Chalk Creek, (6) Entire Unit	150	140	140	472	102
Kamas, (7) West Hills	50	48	48	75	43
Vernal, (11)					
Ashley Val/Deep Crk(pre)	50	47	47	111	42
Ashley Val/Deep Crk(post)	50	43	43	95	31
Heaston, (20)					
Northeast Heaston	30	27	27	53	18
Abajo Mtns., (35)					
Monticello	40	40	40	211	23
Eastland		50	50	90	48
Monroe, (45)**					
Sevier Valley(pre)	50	50	50	136	44
Panguitch Lake, (47)					
Panguitch	25	24	24	68	18
Pine Valley, (50)					
New Harmony-(pre)	40	38	38	131	23
Pine Valley-A	40	38	38	281	21
Enterprise(pre)-B	100	100	100	267	94
Paunsaugunt, (52)					
Johnson Canyon(pre)	40	39	39	84	39
Buckskin	30	23	23	79	19
Total	1185	1134	1124	3670	863

* Two-deer permits (two tags per permit); % success = % of tags filled. (hunters could have up to two tags each); (pre) indicates pre general rifle hunt (post) indicates post general rifle season hunt. Does not include PHU or mitigation harvest.

(6). Archery Harvest

The general archery season occurred August 19 - September 8, except within the Wasatch Front extended archery area which was open until November 26. General archery seasons were authorized statewide except on limited entry units where restricted permits were required. Harvest data were obtained by a random phone survey of archer permittees.

(a) Yearly Summary of Archery Harvest.

Year	Hunters	Hunter	Buck	Antlerless	Total
	Afield	Days			
1942	61		3	26	29
1943	186		0	12	12
1944	75		0	7	7
1945	110		1	0	1
TOTAL	432		4	45	49
1946	248		12	50	62
1947	296		9	41	50
1948	382		18	77	95
1949	244		5	23	28
1950	231		9	12	21
TOTAL	1401		53	203	256
1951	316		34	23	57
1952	429		12	30	42
1953	613		26	66	92
1954	745		69	108	177
1955	1733		129	161	290
TOTAL	3836		270	388	658
1956	3159		366	241	607
1957	4570		361	256	617
1958	5605		455	426	881
1959	7440		683	554	1237
1960	8831		919	907	1826
TOTAL	29605		2784	2384	5168
1961	9889		1219	959	2178
1962	11546		1232	908	2140
1963	12768		1059	981	2040
1964	10910		1088	900	1988
1965	12635		1009	666	1675
TOTAL	57748		5607	4414	10021
1966	12190		1271	1224	2495
1967	12108		1181	886	2067
1968	14164		1494	1104	2598
1969	14902		1350	1062	2412
1970	16775		1819	1189	3008
TOTAL	70139		7115	5465	12580
1971	18480		1913	1423	3336
1972	20564		1834	1409	3243
1973	25832		1961	1540	3501
1974	16648		807	560	1367
1975	18820		1312		1312
TOTAL	100344		7829	4932	12761
1976	15022		874		874
1977	15535		1217		1217
1978	17819		1400		1400
1979	23896		2753		2753
1980	18362		2621		2621
TOTAL	90634		8865	0	8865
1981	20975	103214	3095		3095
1982	24356	132866	3656		3656
1983	25977	127211	3825		3825
1984	26673	147371	3963		3963
1985	27671	153707	4097		4097

TOTAL	125652	664369	18636	0	18636
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Yearly Summary of Archery Harvest (Continued)

Year	Hunters	Hunter	Buck	Antlerless	Total
	Afield	Days			
1986	22381	120233	2274		2274
1987	25368	136741	2181	953	3134
1988	27428	140156	2385	1057	3442
1989	27771	121246	1909	1169	3078
1990	28687	138318	2272	1021	3293
TOTAL	31635	656694	11021	4200	15221
1991	28987	146800	2715	1337	4052
1992	30016	147854	2423	1266	3689
1993	23721	198048	2512	2192	4704
1994	11019	66151	1732		1732
1995**	13107	90644	1963	**	1963
TOTAL	106850	649497	11345	4795	16140
1996	12412	90440	2026	28	2054

** Antlerless harvest data on Wasatch Front extended unit not available.

1. Harvest during 1946-1949 were estimated.
2. From 1979-1985, the archery permit included a tag. An archer could take a deer on the archery permit and the big game or combination license tag - both had to be bucks.
3. From 1987-1993, an archer could take a buck or an antlerless deer but had to use the big game or combination license tag.
4. In 1993, "Choose-Your-Season" hunting was initiated which meant archers could not hunt during general rifle and muzzleloader seasons.
5. In 1994-1996 archers could only take buck deer, with the exception of the Wasatch Front extended unit.

5. (b) Archery Hunt 1996

A total of 13,569 archery permits were sold in 1996. Successful telephone interviews were completed with 4,353 (31.8%) of the permit holders. The following data are estimates based on the projection of this sample.

Herd Unit	Bucks	Antlerless	Hntrs Afld	Partic. Afield	Total Days Afield
1 Box Elder					
A-	25		72	0	420
B-	18		207	4	1408
C-	0		0		0
Total	43		279	4	1828
2 Cache					
A-	12		91	8	859
B-	19		331	19	2603
C-	45		206	4	1226
Total	76		628	31	4688
3 Ogden					
A-	11		155	15	1301
B-	3		75	8	672
Total	14		230	23	1973
4 Morgan S. Rich					
A-	19		103	0	636
B-	11		60	0	355
C-	8		103	4	581
Total	38		266	4	1572
5 East Canyon					
A-	17		93	20	796
B-	44		291	50	2633
Total	61		384	70	3429
6 Chalk Creek	15		167	18	1167
7 Kamas	60		692	25	4652
8 North Slope	7		62	7	466
9 Daggett	9		149	23	1081
11 Vernal	73		311	26	2242
12 South Slope	81		362	23	2139
13 Current Creek	22		242	34	1641
14 Avintaquin	12		43	6	352
15 Anthro Mtn	25		100	16	862
16 Book Cliffs		closed			
A-					
B-					
Total					
17 Salt Lake	26		278	99	2214
18 Heber	131		1067	88	7264
19 Timpanogos	13		191	54	1401
20 Heaston	23		249	82	2044
21 Stansbury	23		59	7	343
22 NW Desert	7		10	0	66
24 Tintic	35		113	7	656
25 N Nebo	46		263	17	2075
26 S Nebo	38		296	10	2152
27 Diamond Fork	35		296	62	2077
28 NW Manti	83		607	22	3827

29 SW Manti	36		350	6	1942
Archery Harvest continued					

Herd Unit	Bucks	Antlerless	Hntrs Afld	Partic. Afield	Total Days Afield
30 NE Manti	89		536	36	3983
31 SE Manti	30		227	15	1465
32 Range Creek	37		201	0	1459
33 Moab	64		328	0	2500
35 Abajo Mtns	55		234	9	1663
37 San Rafael	43		224	12	1553
38 Henry Mtns.					
39 Oak Creek	6		23	0	25
40 W Desert	3		19	3	113
41 Fillmore	106		392	31	2418
42 Salina	95		519	20	3165
44 Boulder	48		259	20	1587
45 Monroe	71		355	17	2286
46 Mt Dutton	14		76	6	564
47 Panguitch	82		379	42	2540
48 Beaver	125		496	28	3082
49 SW Desert	3		12	0	74
50 Pine Valley					
A-	11		40	6	278
B-	37		173	8	891
Total	48		213	14	1169
51 Zion	26		118	20	889
53 Kaiparowits	6		21	6	176
Wasatch Ext Archery	31	28		453	2539
Unknown	12		84		497
Grand Total	2026	28	12410	1496	87900

6) Muzzleloader Harvest 1996

The state's twenty-second muzzleloader season was held November 1 - 9 on a statewide basis, with the exception of Limited Entry areas, High Country Buck areas, Crawford Mountain, the Henry Mountains (unit 38,) and the Salt Lake archery only unit. The hunt was for bucks only, the permittee had to choose the season (muzzleloader) to hunt, and that was his only buck hunt for the year.

Phone calls were made to approximately percent of the permit holders. A total of phone surveys were usable, a projection factor was calculated on a regional basis and was used to calculate the following data.

(a) Yearly Summary of Muzzle-loader Permit Hunting**

Year	Hunters Afield	Hunter Days	HARVEST			% Succ.
			Bucks	Antlerless	Total	
1973	445	1416	35	37	72	16
1974*	356	1202	28		28	8
1975	731	2764	86	11	97	13
1976*	1513	5199	250		250	17
1977*	2298	7782	278		278	12
1978*	1809	5976	193		193	11
1979*	3279	11532	792		792	24
1980*	4093	16212	407		407	10
1981*	4223	16731	898		898	21
1982*	4795	19572	1277		1277	26
1983*	5280	22456	1432		1432	27
1984*	6097	27373	1468		1468	24
1985*	6290	28002	1175		1175	19
1986*	5918	27374	1193		1193	20
1987*	6138	27432	1292		1292	21
1988*	7868	32045	2044		2044	26
1989*	9799	36465	2370		2370	24
1990*	11117	44017	2657		2657	24
1991*	12233	51391	2915		2915	24
1992*	14972	61103	3881		3881	26
1993*	15587	75430	3442		3442	22
1994*	10597	48045	2093		2093	20
1995*	11115	53373	1770		1770	16
1996*	10678	48135	2837		2837	26
TOTAL	157231	671027	34813	48	34861	22

* Buck Only

6. (b) Muzzleloader Hunter Days by Herd Unit - 1996

Muzzleloader hunters were able to hunt deer during a 7-day season in 1996.

Herd Unit	Bucks	Antlerless	Hntrs Afld	Partic. Afield	Total Days Afield
1 Box Elder					
A-	89		320	0	1650
B-	69		302	0	1278
C-	9		14	0	42
Total	167		636	0	2970
2 Cache					
A-	14		142		684
B-	77		391		1636
C-	67		308		1381
Total	158		841	0	3701
3 Ogden					
A-	31		201		868
B-	7		143		669
Total	38		344	0	1537
4 Morgan S. Rich					
A-	85		328		1237
B-	15		81		330
C-	24		151		734
Total	124		560	0	2301
5 East Canyon					
A-	54		181		688
B-	16		129		479
Total	70		310	0	1167
6 Chalk Creek	104		304		1468
7 Kamas	42		254		1145
8 North Slope	6		33		116
9 Daggett	60		256		1330
11 Vernal	157		512		2217
12 South Slope	79		512		2567
13 Current Creek	99		282		1356
14 Avintaquin	8		24		173
15 Anthro Mtn	20		118		541
16 Book Cliffs		closed			
A-					
B-					
Total					
17 Salt Lake	6		12		52
18 Heber	60		249		964
19 Timpanogos	60		157		833
20 Heaston	35		146		642
21 Stansbury	15		181		787
22 NW Desert	11		70		385
24 Tintic	61		220		946
25 N Nebo	60		217		1499
26 S Nebo	111		292		1453
27 Diamond Fork	47		170		800
28 NW Manti	72		274		1345

29 SW Manti	29		99		499
Muzzleloader Harvest continued					
Herd Unit	Bucks	Antlerless	Hntrs Afld	Partic. Afield	Total Days Afield
30 NE Manti	100		290		1409
31 SE Manti	31		96		531
32 Range Creek	33		81		361
33 Moab	59		176		917
35 Abajo Mtns	78		144		750
37 San Rafael	36		117		563
38 Henry Mtns.					
39 Oak Creek	8		26		185
40 W Desert	4		36		250
41 Fillmore	166		463		2209
42 Salina	70		213		1010
44 Boulder	44		208		1159
45 Monroe	108		305		1522
46 Mt Dutton	8		36		175
47 Panguitch	110		448		2405
48 Beaver	67		317		1773
49 SW Desert	4		23		149
50 Pine Valley					
A-	11		49		234
B-	64		317		1682
Total	75		366	0	1916
51 Zion	69		244		1300
53 Kaiparowits	0		10		65
Unknown	68		208		
Grand Total	2837	0	10880	0	51443

DEER HERD UNIT #1

BOX ELDER

Status:

Buck harvest increased greatly in 1996. The harvest of 1,680 bucks is a 30% increase over 1995's harvest. This unit will be at its herd management objective in 1998 barring a harsh winter. Post season deer classifications revealed 11 bucks/100 does. Twenty nine percent of these were 3-point or greater. This unit is still suffering a 50% fawn wintering mortality. This unit will not reach the management objective of 15 bucks/100 does under the current levels of hunter pressure.

Management

Objectives:

Manage for a modeled target winter population of 24,000 deer
Achieve post season ratio of 15 bucks/100 does.
Maintain and protect 588,000 acres of winter range and 194,000 acres of summer range.

Problems &

Strategies:

Condition of important winter range areas:

- C Cooperate with public and private land managers, local government, and PHU operators to improve winter range.
- C Identify critical habitats through herd use and movement observations, studies, and previously collected data.

Depredation:

- C As time and funds allow, continue fencing of haystacks.
- C Schedule depredation hunts to alleviate local problems.
- C Use the PHU program as a tool for managing antlerless deer.

DEER HERD UNIT #1 BOX ELDER(continued)**BOUNDARY DESCRIPTION**

Box Elder, Tooele, Salt Lake, Davis and Weber counties - Boundary begins at the Utah-Idaho state line and Interstate 15; then west along this state line to the Utah-Nevada state line, south along this state line to Interstate 80, east on I-80 to I-15, north on I-15 to the Utah-Idaho state line.

RANGE AREA AND APPROXIMATE OWNERSHIP*

Ownership	Summer Range		Winter Range	
	Area(acres)	%	Area (acres)	%
Forest Service	43,640	22	27,280	3
Bureau of Land Management	46,130	24	212,300	23
Private	97,400	50	648,430	69
State	7,440	4	43,480	5
National Parks and Monuments			160	0.1
TOTAL	194,610		931,650	

* Surveyed 1970; DWR Publ. 71-3.

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	8498	3108	1311	4419	52	1515	1515
1993	6649	1596	583	2179	33	855	855
1994	5354	1341	39	1380	26		
1995*	5373	1284	117	1401	26	400	400
1996	5067	1680	198	1878	33		

* Does not include PHU data.

CLASSIFICATION OF HARVEST TREND

Percent

Bucks					Antlerless				
		Age					Age		
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1992	431	38	45	17	*	*	*	*	*
1993	199	28	51	21	*				
1994	266	50	23	27					
1995									
1996	154	61	26	13	*	*	*	*	*

* Insufficient Data

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #2

CACHE

Status:

The Cache deer herd has mostly recovered from the winter of 1992-93. Both buck harvest (n = 1,962) and fawn/doe ratios (8/100) have improved. Additionally, overwinter losses observed during the 1996 winter were generally minor despite a moderately harsh winter. Liberal antlerless harvest will be necessary to maintain balance between deer numbers and winter range.

Management Objectives:

Manage the mule deer population to a maximum modeled objective of 25,000 and maintain post-season buck/doe ratios of 15:100.

Use the 20 permanent big game transects to evaluate the balance between winter range carrying capacity and big game numbers.

Using conservation easements, land acquisition, and range revegetation to protect, maintain, and improve winter range.

Problems & Strategies:

Decline of winter range quality and quantity

- C Obtain conservation easements or land acquisitions to protect winter range.
- C Assist local, state, Federal, and private landowners in maintaining or improving deer winter ranges through reseeding, seedling plantings, livestock grazing, etc.
- C Assess the relationship between the number of deer and available winter habitat/forage using 20 permanent yearly transects.

BOUNDARY DESCRIPTION

Cache, Rich, Weber and Box Elder counties - Boundary begins at the Utah-Idaho state line and Interstate 15; then east along this state line to the Utah-Wyoming state line; south on this state line to Highway SR-16; north on SR-16 to Highway SR-39; west on SR-39 to the county road from SR-39 to Hardware Ranch (Ant Flat Road); north on the Ant Flat Road to Hardware Ranch and Highway SR-101; west on SR-101 to Highway US 89-91; southerly on US 89-91 to I-15; north on I-15 to the Utah-Idaho state line.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range	Winter Range
Ownership	Area (acres)	Area (acres)
Forest Service	258,883	24,100
Bureau of Land Management	19,204	102,894
Private	189,480	44,800
State	41,880	49,771
Wildlife Resources	0	23,000
TOTAL	509,447	244,565

DEER HERD UNIT 2 - CACHE (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler- less	Total	% Succ.	Auth.	Sold
1992	15,934	3,211	1,606	4,817	30	2,093	2,093
1993	7,128	503	143	646	09	468	468
1994	7,503	1,081	166	1,245	17	320	320
1995	8,413	1,724	112	1,836	22	283	283*
1996	8,599	1,962	199	2,161	25	340	340

* Includes landowner and mitigation permits

CLASSIFICATION OF HARVEST TREND*Percent

Bucks					Antlerless				
		Age					Age		
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1992	376	56	27	17	No Date				
1993	21	14	33	52	No Date				
1994	111	73	03	24	No Date				
1995	64	81	08	11	No Date				
1996	248	67	18	16	No Date				

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	1120	459	--	79	72	42	--	9	2
93-94	--	838	1167	--	54	49	38	--	12	--
94-95	--	1311	1021	--	65	63	66	--	10	3
95-96	--	1105	921	--	64	57	58	--	12	5
96-97	--	1,681	963	--	88	77	70	--	15	5

Cache overwinter browse utilization

Study #	Name	% Utilization						
		Artr ¹	Putr ²	Juos ³	Other species (n > 4)			
2-1	High Creek	2	27	--	--	--	--	--
2-5	Smithfield Dry Canyon	23	46	10	--	--	--	--
2-6	Green Canyon	43	62	--	7 ^g	--	--	--
2-7	Spawn Canyon	16	59	30	65 ^b	--	--	--
2-8	Millville Canyon	86	--	12	85 ^c	--	--	--
2-9	Beirdneau	90	91	19	51 ^g	50 ^a	11 ^h	16 ^j
2-12	2nd Dam Blacksmith Fork	80	84	35	25 ^a	25 ^a	--	--
2-13	Hardware Plateau	77	90	--	81 ^b	90 ^c	78 ^d	--
2-16	Garden City Canyon	5	19	5	6 ^c	3 ^b	0 ⁱ	--
2-17	Meadowville	34	55	--	31 ^c	6 ^m	--	--
2-19	Right Hand Fork Logan Canyon	73	93	37	88 ^c	66 ^d	78 ^g	16 ^j
2-20	Richmond WMA	6	--	--	--	12 ^d	0 ⁱ	--
2-22	Box Elder Canyon	53	52	20	31 ^e	44 ^d	--	--
2-25	Mouth of Two Jump Canyon	26	--	5	7 ^e	--	78 ^g	--
2-27	Old Laketown Canyon	62	--	6	83 ^e	50 ^c	5 ^j	11 ^g
2-28	North Eden	54	70	--	56 ^f	--	53 ^c	--
2-29	Woodruff Creek	61	95	6	47 ^m	--	--	--
2-32	Wood Pass	37	80	0	14 ^m	--	19 ^m	--
2-36	Woodruff Coop WMA	36	--	--	13 ^k	--	--	--
2-37	Twin Creek	10	11	--	--	--	--	--

¹Artemesia tridentata

^aBlue Elderberry

^bDouglas Rabbitbrush

^cServiceberry

^dChokecherry

^eSmooth Sumac

²Purshia tridentata

^fWinterfat

^gGreen Rabbitbrush

^hBigtoothed Maple

ⁱLow Sagebrush

^jWoods Rose

³Juniperus osteosperma

^kGreasewood

^lTrue Mountain Mahogany

^mSnakeweed

Cache Overwinter Big Game Range Use and Deer Mortality

Study #	Name	Deer Days/Ha					96-97 Deer Winter Mortality	Elk Days/Ha
		89- 90 ¹	92- 93	94- 95	95- 96	96- 97 ²		
2-1	High Creek	3	12	2	--	6	None	0
2-5	Smithfield Dry Canyon	136	20	--	--	40	None	6
2-6	Green Canyon	128	34	--	5	40	1 &f	9
2-7	Spawn Canyon	51	--	--	--	11	None	63
2-8	Millville Canyon	22	48	--	--	86	None	38
2-9	Beirdneau	63	45	--	--	62	None	102
2-12	2nd Dam Blacksmith Fork	74	46	18	8	82	1&f, 1%f	17
2-13	Hardware Plateau	102	--	17	--	137	1&f	45
2-16	Garden City Canyon	168	85	33	--	48	None	3
2-17	Meadowville	181	51	40	--	75	None	0
2-19	Right Hand Fork Logan Cyn	--	--	--	--	45	None	34
2-20	Richmond WMA	--	0	--	--	18	1&f	6
2-22	Box Elder Canyon	--	--	--	--	63	None	0
2-25	Mouth of Two Jump Canyon	--	--	--	--	78	None	0
2-27	Old Laketown Canyon	--	--	--	--	71	None	0
2-28	North Eden	--	--	--	--	208	1&f	0
2-29	Woodruff Creek	--	--	--	--	100	None	0
2-32	Wood Pass	--	--	--	--	46	None	0
2-36	Woodruff Coop WMA	--	--	--	--	83	1&f, 1%f	0
2-37	Twin Creek	--	--	--	--	11	None	28

¹No data available for 1990-91, 1991-92, or 1993-94.

²Permanent plots established on all transects for 1996-97. Data collected previous to 1996-97 were from randomized, non-permanent plots so data may no be comparable.

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

DEER HERD UNIT #3

OGDEN

Status: The Ogden buck harvest is only 31% of the target objective of 1,900. Post season and spring classifications have been improving since 1992-93, but are well below 1990 levels. Continued urbanization and loss of winter range on this unit may jeopardize target herd unit objectives.

Management Objectives:

Increase deer populations to a modeled objective of 15,000.

Maintain post-season buck/doe ratios of 15:100.

Maintain and/or enhance critical habitat to sustain wintering deer.

Problems & Strategies:

Range condition on important winter ranges

- C Habitat conditions need to be improved on public and private lands if deer populations are to be built.
- C Use habitat funds to acquire seed and seedlings to improve range conditions.

Depredation

- C Use seasonal depredation hunts to address localized problems.
- C Use annual doe hunts to minimize future problems.

BOUNDARY DESCRIPTION

Weber, Box Elder, Cache, and Morgan counties - Beginning at Hyrum; then easterly on SR-101 to the Ant Flat Road (at Hardware Ranch); southerly on this road to SR-39; westerly and southerly on SR-39 to SR-167 (the new Trappers' Loop Road); southerly on this road to I-84; westerly on I-84 to I-15; northerly on I-15 to Exit 364 and U.S. -91; easterly and northerly on U.S. -91 to SR-101; easterly on this highway to Hyrum.

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	7,522	2,250	207	2,467	33	300	300
1993	4,054	335	25	360	09	100	100
1994*	3,395	621	0	621		00	00
1995	2,508	559	0	559	--	--	--
1996	2,901	598	0	598	21		

*DOES NOT INCLUDE PHU'S

DEER HERD UNIT #3 - OGDEN (continued)**CLASSIFICATION OF HARVEST TREND**

Percent

Bucks					Antlerless				
		Age				Age			
Year	Sample Size	% 1.5	% 2.5	% Prime	Sample Size	F	1.5	2.5	PRIME
1992	285	54	30	16					
1993	25	20	56	24					
1994	40	73	0	27					
1995	47	70	19	11					
1996	56	70	5	25					

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--									
93-94	--	185	257	--	45	42	67	--	7	
94-95	--	774	102	--	71	66	68	--	7	1
95-96	--	307	798	--	66	57	57	--	14	3
96-97	--	646	602	--	84	74	49		14	8

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96
Mouth of Pearson's Canyon* (4,680)				
Cook's Canyon* (4,760)				
Facer Canyon* (4,800)				
Brigham Face* (4,800)				
White's Orchard* (4,820)				
Perry Basin* (5,100)				
Mathias Canyon* (5,280)				
Hyrum Canyon* (5,560)				
N.E. Mantua Reservoir* (5,600)+				
Porcupine Dam* (5,640)				
East Mantua* (5,540)				
Three-Mile Canyon* (6,120)				
Clay Basin* (6,320)				

* Permanent Vegetative Trend Transect

+ Deer and sheep use.

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #4

MORGAN-S. RICH

Status:

The 635 bucks harvested on this unit is below the objective of 1,400. Fawn/doe ratios have returned to pre-1992 levels. Continued use of antler less harvest strategies will be needed to keep this deer herd under control. Overall, the 1995-96 winter was generally mild and winter range has shown slight signs of improvement. Due to the high percentage of private land on this unit (85%), buck/doe ratios are much higher than on public land (27/100).

Management

Objectives:

Maintain a modeled deer population of 10,750 deer and a post-season buck/doe ratio of 35:100.

Maintain and/or enhance current winter habitat to sustain population objective.

Cooperate with private landowners and public land managers to improve winter range.

Problems &

Strategies:

Range condition on important winter ranges

- C Continue range improvement projects on public and private land.
- C Encourage county government and planning offices to consider the importance of deer winter range as they consider land use planning.
- C Continue to control vehicle access on the Henefer-Echo WMA.
- C Obtain easements, leases, trades, or purchase critical habitat.

Deer population increases

- C Use the PHU program and aggressive antler less harvest to slow the growth of this deer herd.
- C Address depredation as needed

BOUNDARY DESCRIPTION

Morgan, Rich, Summit AND Weber counties - Boundary begins at the junction of Interstates 84 and 80 near Echo; then northeasterly on I-80 to the Utah-Wyoming state line; north along this state line to Highway SR-16; north on SR-16 to Highway SR-39 near Woodruff; west on SR-39 to Highway SR-167 (Trappers Loop Road); south on SR-167 to Highway SR-30 at Mountain Green; west on SR-30 to I-84; east on I-84 to I-80.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%
Forest Service				
Private				
State				
Other (Unclassified)				
TOTAL				

DEER HERD UNIT 4 - MORGAN RICH (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	5,320	4,056	1,951	6,007		1,600	1,600
1993	1,943	296	65	361	19	300	300
1994 ¹	1,777	311	00	311		00	00
1995 ²	2,406(358) ²	481(154) ²	30(90) ²	755	27	200	200
1996	3,160	1,200	161	1,361		200	200

¹ Does not include PHU's.² PHU Hunts**Harvest Pressure Trend**

County Residence of Hunter	1992	1993	1994	1995	1996
Morgan	11				
Salt Lake	13				
Davis	25				
Weber	30				
Other Counties	12				
Nonresident	9				

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	--	--	--	--	43	--	--	16	--
93-94	--	148	483	--	26	19	29	--	31	5
94-95	--	380	953	--	80	69	66	--	16	8
95-96	--	482	651	--	77	61	52	--	27	10
96-97	--									

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

DEER HERD UNIT #5

EAST CANYON

Status: The current buck harvest of 824 is currently below the objective of 1,100. Doe/fawn ratios have continued to improve since 1992 and were 76 F/100 D in 1996. Loss of winter range from development seriously threatens the future of this deer herd unit.

Management Objectives:

Manage for a modeled deer population of approximately 9,500 deer.

Maintain a post-season buck/doe ratio of 15:100.

Maintain, enhance, and protect big game habitat within the unit to sustain a viable deer population in balance with available habitat.

Problems & Strategies:

Development of foothill areas continues and winter range is being lost at alarming rates.

- C Develop a pro-active strategy in dealing with urban deer.
- C Convince urban planners and county commissioners of the importance of deer winter range preservation.
- C Use DWR personnel to remove non-migratory groups of urban deer.
- C As winter range is lost, deer populations should be reduced accordingly.

Habitat

- C Acquire and enhance deer winter range where possible.

BOUNDARY DESCRIPTION

Morgan, Summit, Salt Lake and Davis counties- Boundary begins at the junction of Interstates 80 and 84 (Echo Junction); then south and west on I-80 to I-15; north on I-15 to I-84; east on I-84 to I-80.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service				
Private				
State				
Other (Unclassified)				
TOTAL				

DEER HERD UNIT #5-EAST CANYON(continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler- less	Total	% Succ.	Auth.	Sold
1992	9,797	2,916	3,008	5,924	60	2,425	2,425
1993	3,922	362	116	478	13	600	600
1994	3,017	616	112	728		125	125
1995	3,059	733	42	775	25	200	200
1996	2,505	824	108	932	37	212	212

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks> 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	733	339	--	68	65	22	--	4	1
93-94	--	394	538	--	44	40	48	--	10	--
94-95	--	980	825	--	70	63	59	--	10	5
95-96	--	583	853	--	64	55	66	--	15	6
96-97	--	972	1,096	--	76	68	56	--	11	

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

DEER HERD UNIT #6

CHALK CREEK

Status:

Fawn production on this unit is high at 74/100 does. The buck harvest of 473 is significantly lower than the objective of 1,600. The buck/doe ratio has also been improving and is currently at 14/100. Urbanization is currently a problem along foothill areas. Overall, the 1995 winter was mild and deer did not fully utilize winter range.

Management

Objectives:

Manage for a modeled objective of 11,500 wintering deer.

Manage for a post-season buck/doe ratio of 20:100.

Maintain and enhance current winter habitat to sustain population objective.

Cooperate with private landowners and public land managers to improve critical winter habitat.

Problems &

Strategies

Development of foothill areas and improvement of winter range.

- C Work with county planners and commissioners to illustrate the importance of preserving deer winter range.
- C Obtain seeds and seedlings to enhance wildlife habitat on public and private land.

Management of existing deer populations

- C Use the PHU program to manage increasing deer populations.
- C Use depredation hunts where needed.

BOUNDARY DESCRIPTION

Summit and Duchesne counties - Boundary begins at the junction of Interstates 84 and 80 near Echo; then northeasterly on I-80 to the Utah-Wyoming state line; south and east along this state line to Highway SR-150; south on SR-150 to Pass Lake and the Weber River Trail; west on this trail to Holiday Park and the Weber River road; west on this road to Highway SR-32; north and west on SR-32 to I-80 and Wanship; north on I-80 to I-84 near Echo.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	11,900	5		
Private	226,200	95	91,000	98
Wildlife Resources			1,400	2
State	4,400	3	600	1
TOTAL	238,100		93,000	

* Surveyed 1977; DWR Publ. 79-3.

DEER HERD UNIT 6 - CHALK CREEK**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	5,534	1,742	448	2,190	40	375	375
1993	2,528	577	86	663	26	300	300
1994 ¹	1,832	581	00	581		00	00
1995 ²	1,731 (242) ²	473 (64) ²	45 (32) ²	614	31	150	150
1996	1,277	825	145	970		245	245

¹ DOES NOT INCLUDE PHU'S² PHU Hunts**CLASSIFICATION DATA**

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	693		--	--		38		11	
93-94	--		354	--	45	39	37		15	
94-95	--	791	922	--	79	70	71	--	13	5
95-96	--	863	855	--	74	65	59	--	14	3
96-97										

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

DEER HERD UNIT #7

KAMAS

Status:

The 1996 harvest of 591 bucks was an increase of 8% from 1995. However, this represents only 45% of the harvest objective. Post-season fawn/doe ratios has declined (69 vs. 89). This deer continues to recover from the 1992-93 winter.

Management

Objectives:

Maintain the deer population at a modeled objective of 12,000 wintering deer or at a level consistent with winter range quality.

Maintain buck/doe ratios of 15:100.

Maintain, enhance, and protect deer habitat within the unit to sustain a healthy deer population.

Problems &

Strategies:

Range condition on important winter range areas.

- C Enhance habitat on the Kamas WMA.
- C Work with private groups and public land management agencies to enhance wildlife habitat.
- C Loss of winter habitat will be addressed.
- C If possible, assess deer and elk conflicts on winter range.

Management of existing deer populations

- C Use the PHU program and antlerless permits to address increasing deer populations.

BOUNDARY DESCRIPTION

Summit and Wasatch counties - Boundary begins at the junction of Interstate 80 and Highway SR-32 (Wanship); then south on SR-32 to the Weber Canyon road at Oakley; east on this road to Holiday Park and the Weber River Trail; east on the Weber River Trail to Highway SR-150 near Pass Lake; south on SR-150 to the Provo-Duchesne River drainage divide; south along this drainage divide to the Wolfe Creek Pass and Highway SR-35; west on SR-35 to Francis and Highway SR-32; west on SR-32 to Highway US-40 near Jordanelle; north on US-40 to I-80; north on I-80 to SR-32 and Wanship.

RANGE AREA AND APPROXIMATE OWNERSHIP*

Ownership	Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%
Forest Service	225,300	80	5,900	18
Private	28,200	10	24,800	77
State	28,200	10	900	3
Wildlife Resources			800	2
TOTAL	281,700		32,400	

* Surveyed 1977; DWR Publ. 79-3.

DEER HERD UNIT #7 - KAMAS**HARVEST SUMMARY**

		Harvest				Antlerless Permits	
Year	Hunters Afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	5,329	1,129	121	1,250	23	202	202
1993	2,155	130	60	190	09	77	77
1994	1,812	270	00	270	20	00	00
1995	3,110	549	58	607	20	75	75
1996	2,698	591	42	633	23	50	50

CLASSIFICATION OF HARVESTPercent

Bucks					Antlerless				
		Age					Age		
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1992	77	55	16	29					
1993	11	0	55	45					
1994	32	72	09	19					
1995	47	66	21	13					
1996	46	54	26	20					

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	655	298	--	69	63	19		11	3
93-94	---	21		--	36	31			14	14
94-95	--	543	445	--	80	69	65	--	16	8
95-96	--	192*	538	--	84	78	62	--	8	5
96-97	--	488	750	--	69	57	55	--	20	

* Poor counting conditions - very warm, deer remained high and were scattered

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #8

NORTH SLOPE

Status: Deer populations on this unit are characteristically low because they tend to move off the unit before the start of the general hunting season. During 1995, 103 bucks were harvested by 760 hunters. Classification data are not collected on this unit.

Management

Objectives: To winter 300 deer on this unit and maintain a post-season buck/doe ratio of 15:100.

Maintain and enhance habitat to preserve deer habitat.

Problems &

Strategies:

Habitat

- C Use habitat council funds to acquire and enhance habitat where available.
- C Develop habitat improvement projects were needed.

BOUNDARY DESCRIPTION

Summit County - Boundary begins at the Utah-Wyoming state line and Highway SR-150; then south on SR-150 to the Summit-Duchesne county line; east along this county line to the Burnt Fork-Sheep Creek drainage divide; north along this drainage divide to the Burnt Fork-Birch Creek drainage divide; north along this drainage divide to the Utah-Wyoming state line; west along this state line to SR-150.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	321,600	88	14,900	42
Private	39,500	11	15,400	44
State	3,700	1	2,500	7
Other (Unclassified)	200	1	2,300	7
TOTAL	365,000		35,100	

* Surveyed 1971; DWR Publ. 72-10.

DEER HERD UNIT 8 - NORTH SLOPE**HARVEST SUMMARY**

		Harvest				Limited Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	1,662	319	0	319	20	220	220
1993	808	109	0	109	14	220	220
1994	632	12	0	12	6	220	220
1995	760	103	0	103	--	220	220
1996	680	240	0	240	35	220	220

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	--	--	--						
93-94	--	808*			42	35			21	
94-95										
95-96										
96-97										

* Wyoming data

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #9

DAGGETT

Status: Overall range conditions continue to improved. Browns Park and Clay Basin browse conditions are especially improving. Fawn production increased with overwinter fawn survival at 86%. The 1996-976 winter was wet with significant snow accumulation. Range rides found some winter kill.

Management

Objective: Management objectives for this unit are to reduce hunting pressure and increase opportunity to harvest a mature buck, and to control deer numbers around agriculture ground to lessen depredation.

Manage for a minimum postseason buck/doe ratio of 10.

Problems &

Strategies: Low buck/doe ratios continue to be a problem.
- reduce buck hunter numbers.

Depredation on agricultural crop land.
- use depredation and/or antlerless hunts when needed.

Range condition and trend in Browns Park and Clay Basin.
- continue to monitor with Federal Agencies.

BOUNDARY DESCRIPTION

Daggett and Summit Counties - Boundary begins at the Utah-Wyoming state line and the Burnt Fork-Birch Creek drainage divide; then east along this state line to the Utah-Wyoming-Colorado state lines (Three Corners); south along the Utah-Colorado state line to the Green River; west along the Green River to the shoreline of Flaming Gorge Reservoir; southwest along this shoreline to Cart Creek; south along this creek to Highway US-191; south on US-191 to the Daggett-Uintah County line (summit of the Uinta Mountains); west along this county line to the Summit-Duchesne county line; west along this county line to the Burnt Fork-Sheep Creek drainage divide; north along this drainage divide to the Burnt Fork-Birch Creek drainage divide; north along this drainage divide to the Utah-Wyoming state line.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	269,300	80	105,300	36
Bureau of Land Management	33,700	10	118,800	41
Private	33,700	10	43,000	15
State			19,200	7
Wildlife Resources			4,000	1
TOTAL	336,700		290,300	

DEER HERD UNIT 9 - DAGGETT (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler- less	Total	% Succ.	Auth.	Sold
1992	*69 205 1875	*40 0 339	*0 174 0	*40 157 339	*59 85 18	*69 225 --	*69 225 --
1993	*51 28 838	*35 0 114	*0 19 0	*35 19 114	*69 68 14	*55 *55 --	*55 51 --
1994	*40 638	*29 158	*0 0	*29 158	*73 26	*44 --	*43 --
1995	855	236	0	236	28	--	--
1996	1330	444	0	444	33	--	--

* Limited Entry - Three Corners Part (Rifle)

CLASSIFICATION OF HARVESTPercent

Bucks					Antlerless				
		Age (%)					Age (%)		
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1992	+				+				
1993	33	31	19	50	+				
1994	+				+				
1995	37	72	11	17	+				
1996	80	80	14	6	+				

+ No data

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	894	610	--	43	40	26	--	7	3
93-94	--	458	989	--	46	44	34	--	5	1
94-95	--	830	750	--	44	41	34	--	7	3
95-96	--	446	579	--	42	38	46	--	10	4
96-97	--	533	578	--	61	55	47	--	11	4

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #11

VERNAL

Status: Overall range conditions are good. However, the winter range north of Vernal received significant utilization by deer and elk. The browse has grown back with the good moisture year. Fawn production improved. Overwinter fawn survival was 76%. The 1996-97 winter was wet with heavy snow accumulation. Range rides found some winter kill.

Management

Objective: Management objectives for this unit are to reduce hunting pressure and increase opportunity to harvest a mature buck, and to control deer numbers around agriculture ground to lessen depredation.

Manage for a minimum postseason buck/doe ratio of 10.

Problems &

Strategies: Loss of critical winter range to phosphate mining.

- With the help of the Utah Division of Oil, Gas and Mining, monitor the development companies master plans to conform with existing laws. Encourage reseeding and revegetation of phosphate mined lands, conversion of pinyon-juniper stands to browse-grass stands, manipulation of existing chainings by burning and spraying sagebrush to release bitterbrush, and carefully scrutinize all mineral claims on deer winter range.

Agricultural crop depredation

- Continue working with landowners and using special hunts to remove offending animals.

BOUNDARY DESCRIPTION

Uintah County - Boundary begins at Highway US-40 and the Utah-Colorado state line; then south along this state line to the White River; west along this river to the Green River; west along the Green River to the Duchesne River; northwest along this river to the Uinta River; north along the Uinta River to Deep Creek; north along this creek to the Paradise Reservoir road; north on this road to Paradise Reservoir and the Whiterocks-Dry Fork drainage divide; north along this drainage divide to the Uintah-Daggett County line; east along this county line to Highway US-191; north on US-191 to Cart Creek; north along this creek to the east shoreline of Flaming Gorge Reservoir; east along this shoreline to the Green River; east along this river to the Utah-Colorado state line; south along this state line to US-40, excludes Dinosaur National Monument and all Indian Tribal Lands.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	354,800	60	19,600	8
Bureau of Land Management	118,300	20	140,400	55
Private	118,300	20	25,900	10
State			19,800	8
Wildlife Resources			900	1
National Parks and Monuments			43,800	17
Indian			2,700	1
TOTAL	591,400		253,100	

* Surveyed 1966; F. & G. Bull. 67-1

DEER HERD UNIT 11 - VERNAL (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler- less	Total	% Succ.	Auth.	Sold
1992	5081 390	1,803 0	0 337	5081 337	36 86	450	450
1993	2837 65	878 0	0 50	878 50	31 63	100	
1994	1818	979	0	979	54		
1995	2264 91	874 0	0 60	874 60	39 66	100	
1996	1710 93	761 0	0 79	761 79	44 85	100	

CLASSIFICATION OF HARVEST(Percent)

Bucks					Antlerless				
		Age (%)				Age			
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1992	88	73	12	15	+				
1993	+				+				
1994	91	80	11	9	+				
1995	12	92	0	8	+				
1996	103	51	33	16	+				

+ No Data

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks> 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	1120	804	--	54	52	34	--	5	1
93-94	--	1070	966	--	49	47	31	--	4	1
94-95	--	969	903	--	50	47	44	--	6	1
95-96	--	1176	895	--	59	54	42	--	8	1
96-97	--	1473	1595	--	76	70	53	--	9	2

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #12

SOUTH SLOPE

Status: Overwinter mortality of fawns in '96-'97 caused this unit to experience a slight decrease in overall deer numbers. The buck harvest for this unit increased by about 400 animals in 1996. This increase was greater in proportion than the actual increase in buck numbers in the herd.

Management

Objective: Increase and maintain deer numbers compatible with forage resources and provide a quality hunting experience for sportsmen by maintaining a high percentage of mature bucks in the harvest.

Problems &

Strategies: Habitat loss due to energy development.
 - Work with land management agencies, energy development companies to protect and improve critical deer area on the limited summer range and in critical wintering areas.
 Maintenance of a quality hunting experience.
 - Develop a hunting strategy to limit harvest or change management objective.

BOUNDARY DESCRIPTION

Duchesne, Uintah, and Wasatch counties - Boundary begins at the confluence of the Duchesne and Uinta Rivers; northerly along the Uinta River to Deep Creek; northerly along this creek to the Forest Service road 104 (Paradise Park Reservoir road); northerly along this road to Paradise Park Reservoir and the Dry Fork - Whiterocks drainage divide; north along this drainage divide to the summit of the Uinta Mountains (Uintah-Daggett and the Duchesne-Summit county lines); west along this summit to Highway SR-150; southwesterly on SR-150 to the Provo-Duchesne River drainage divide; south on this drainage divide to Wolf Creek Summit and Highway SR-35; east on SR-35 to Highway SR-87; south on SR-87 to Highway US-40 at Duchesne; east on US-40 to the Duchesne River; southeasterly on this river to the Uinta River (excluding all Ute Indian tribal lands within this boundary).

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Area (percent)
Forest Service	561,507	46
Indian	275,083	22
Private	389,680	32
Bureau of Land Management	1,003	< 1
TOTAL	1,227,273	100

DEER HERD UNIT #12 - SOUTH SLOPE(continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	6,400	1,766	173	1,939	30	200	200
1993	3,691	476	125	601	16	200	200
1994	1,781	672	0	672	38	0	0
1995	2,025	689	121	810	34	100	100
1996	3,108	1169	139	1308	38	0	0

CLASSIFICATION DATA

Sample Size			Fawns/ 100 Does	Fawns/ 100 Adults		Bucks/ 100 Does	Bucks> 2pt 100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	510	1157	50	45	15	9	4
93-94	587	900	33	32	32	4	
94-95	640	899	55	52	49	6	2
95-96	912	909	64	57	49	12	3
96-97	588	1087	76	71	36	7	2

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #13

CURRENT CREEK

Status:

Deer numbers on the unit are recovering well from the heavy winterkill of 1992-93. Range conditions have improved due to good weather in 1995, 1996, and 1997. Fawn production has been good in 1994, 1995, and 1996 due to improved range conditions and mild winters. However, extreme winter conditions this last winter decreased overwinter fawn survival to 50%. Fawn production in 1997 is also expected to be slightly lower due to the long, hard winter and deep snow conditions. The heavy winter loss essentially leaves the unit with approximately the same number of deer as this time last year. Due to the heavy winter kill unit wide antlerless deer hunts not be initiated in 1997.

Management

Objective:

Maintain deer numbers at levels consistent with range conditions.

Problems &

Strategies:

Excessive vehicle accessibility.

- Continue to encourage the closure of unnecessary roads and completely evaluate any proposed new roads.

Assessing winter mortality.

- Continue to refine methods for assessing winter mortality and investigate methods for predicting winter mortality.

Loss of winter range due to rapidly increasing development in west Duchesne County.

- Increase efforts to acquire property or permanent wildlife easements in areas of critical winter range.
- Further habitat improvement projects on DWR, State, Federal, and privately owned lands.

BOUNDARY DESCRIPTION

Duchesne and Wasatch counties - Boundary begins at Duchesne; then north on Highway SR-87 to Highway SR-35; northwesterly on SR-35 to Wolf Creek Pass and the Provo River-Duchesne River drainage divide; south along this drainage divide to Heber Mountain; south along the Strawberry River-Daniels Canyon drainage divide to Highway US-40; east on US-40 to the Soldier Creek Dam road; south on this road to the Soldier Creek Dam and the Strawberry River; east along this river to Duchesne.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service			440	
Private			47,666	
State (includes UDWR)	50,189		50,500	
Wildlife Resources				
Water and Power Resources				
Indian	0.00		16,834	
TOTAL				

DEER HERD UNIT 13 - CURRANT CREEK (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	8,377	2,238	312	2,550	30	350	350
1993	3,689	469	92	561	15	150	127
1994	2,152	737	0	737	34	0	0
1995	1,756	399	0.00	399	23	0.00	0.00
1996	2,760	855	0.00	878	31	0.00	0.00

CLASSIFICATION OF HARVEST

Percent

Bucks					Antlerless				
		Age					Age		
Year	Sample Size	%1.5	%2.5	%Prime	Sample Size	F	%1.5	%2.5	%PRIME
1992	110	56	19	25	*				
1993	33	21	27	52	*				
1994	45	78	6	6	+				
1995	34	85	6	9	+				
1996	83	61	34	5	+				

+ No Data *Insufficient Data

CLASSIFICATION DATA

Sample Size			Fawns/ 100 Does	Fawns/ 100 Adults		Bucks/ 100 Does	Bucks > 2pt 100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	1,155	2,044	55	53	7	4	1
93-94	635	1,103	36	34	32	4	2
94-95	1,287	1,269	77	74	59	4	2
95-96	1,378	1,505	61	56	46	11	2
96-97	1,841	1,186	77	69	34	12	5

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #14

NORTH AVINTAQUIN

Status: Deer numbers on this unit are still recovering from the winterkill of 1992-93. Range condition on the unit is improving following excellent growing conditions in 1995, 1996, and 1997. With continuing good weather and improving range conditions production on the unit will continue to improve. Production on the unit had increased steadily for the past three years. However, unusually deep snow and the lack of a mid-winter thaw during the 96-97 winter combined to reduce overwinter fawn survival on the unit to 56%. Fawn production in 1997 is also expected to be effected due to the effects of the hard winter on the pregnant does.

Objective: Maintain deer numbers at levels consistent with range conditions.

Problems & Strategies:

- Determining the extent of winter mortality.
 - Identify the potential causes of winter mortality and develop a system for monitoring this mortality.
- Roads providing unnecessary access in the south Strawberry Valley.
 - Work with other land management agencies to develop a travel plan for the area. Seek closure of unnecessary roads.

BOUNDARY DESCRIPTION

Duchesne, Utah and Wasatch counties - Boundary begins at Duchesne and Highway US-191; then southerly on US-191 to the Reservation Ridge road; westerly and northerly on this road to Big Beaver Springs road; northerly on this road to Big Beaver Springs and Beaver Canyon; northeasterly along this canyon to the Strawberry River; easterly along this river to Duchesne (excluding all Ute Tribal lands within this boundary).

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	93,361	96	9,980	7
Private	4,067	4	36,470	26
Wildlife Resources			26,323	18
Indian			68,740	49
TOTAL	97,428		141,513	

* Surveyed 1980.

DEER HERD UNIT 14 - NORTH AVINTAQUIN (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler- less	Total	% Succ.	Auth.	Sold
1992	1,222	290	0.00	290	24		
1993	597	87	0.00	87	15		
1994	334	93	0.00	93	28		
1995	497	113	0.00	113	23		
1996	266	85	0.00	98	32		

CLASSIFICATION OF HARVESTPercent

Bucks					Antlerless				
		Age					Age		
Year	Sample Size	% 1.5	% 2.5	% Prime	Sample Size	F	1.5	2.5	PRIME
1992	+				+				
1993	+				+				
1994	+				+				
1995	+				+				
1996	16	69	19	13	+				

+ No Data

CLASSIFICATION DATA

Sample Size			Fawns/ 100 Does	Fawns/ 100 Adults		Bucks/ 100 Does	Bucks > 2pt 100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	643	1242	49	46	12	7	2
93-94	226	752	44	41	27	7	4
94-95	479	921	53	48	41	10	3
95-96	200	1330	61	54	38	12	6
96-97	182	1,052	68	61	34	12	6

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #15

ANTHRO MOUNTAIN

Status: Summer range is limited in size and quality. Winter range is in good condition and is not considered a limiting factor for this deer herd. Deer numbers are extremely low on this unit. Fawn production increased in 1996 and overall deer numbers show a slight improvement. A large percentage of the harvest comes from agricultural lands along the Duchesne and Green River drainages.

Management

Objective: Maintain an annual harvest of 250 buck deer.

Problems &

Strategies: **Limited summer range.**

- Encourage and assist land management agencies in preserving and enhancing valuable summer range by protecting the aspen vegetation zone from overgrazing, provide water by installing guzzlers, continue vegetation manipulation and close roads when necessary.

BOUNDARY DESCRIPTION

Duchesne and Uintah counties - Boundary begins at Duchesne and Highway US-191; then southwesterly on US-191 to the Argyle Canyon road; southeasterly on this road to Nine Mile Canyon drainage; east along this drainage to the Green River; north along this river to the Duchesne River; northwesterly along this river to Highway US-40; west on US-40 to Duchesne (excluding all Ute Tribal lands).

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	102,649	16
Bureau of Land Management	271,908	43
Private	137,347	21
State	35,151	5
Indian	92,173	14
TOTAL	639,228	100

DEER HERD UNIT #15-ANTHRO MOUNTAIN (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antlerles s	Total	% Succ.	Auth.	Sold
1992	831	169	33	202	24	50	50
1993	531	168	24	192	36	50	50
1994	315	116	0	116	37	0	0
1995	502	163	24	187	32	30	30
1996	717	241	12	253	34	0	0

CLASSIFICATION DATA

Sample Size			Fawns/ 100 Does	Fawns/ 100 Adults		Bucks/ 100 Does	Bucks> 2pt 100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	326	375	28	25	15	9	3
93-94	183	334	60	34	25	6	
94-95	91	248	52	47	30	11	0
95-96	155	271	52	48	45	7	1
96-97	53	262	67	61	39	10	0

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #16A

NORTH BOOK CLIFFS

Status: The deer herd is below population objective. Buck ratios are below the statewide objectives established by the Board. Fawn recruitment has been low for several years. Winter range forage conditions are degraded in some areas. Excessive OHV travel has developed an extensive road network.

Management Objective: Allow the deer herd to grow to population objectives. Develop buck harvest programs that will meet the statewide management objective of 15 bucks/100 does postseason.

Problems & Strategies:

Continued heavy livestock utilization impacts to mule deer winter ranges.

- Continue to work with land management agencies for improved grazing systems.

Habitat losses due to road impacts and expanded energy development.

- Work with land management agencies to protect and improve critical deer range and the limited summer ranges.
- Encourage the development of OHV travel and road management plans.

Highly polarized public interest in buck hunting strategies.

- Continue to work for unity in a long-term buck harvest management program.

BOUNDARY DESCRIPTION

Uintah and Grand Counties - Boundary begins at the junction of the White River and the Utah Colorado State line; then south along the state line to the Book Cliff Divide; west along the Book Cliff Divide to the Uintah and Ouray Indian Reservation Boundary; north and west along this boundary to the Green River; north along the Green River to the White River; east along the White River to the state line. EXCLUDING ALL INDIAN TRUST LANDS.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Bureau of Land Management				
Private				
State				
Indian				
TOTAL				

DEER HERD UNIT 16A - NORTH BOOK CLIFFS (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992 A	2,564	724	0	724	28		
1993 A	1,621	628	0	628	39		
1994 A	1,549	563	0	563	36		
1995 A							
1996 A	CLOSED	0	0	0	0		

CLASSIFICATION OF HARVESTPercent

Bucks					Antlerless				
		Age				Age			
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1992									
1993									
1994	76	57	16	3	0	0	0	0	0
1995	46	40	3	3	0	0	0	0	0
1996	0	0	0	0	0	0	0	0	0

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	878	880	--	40	38	17	--	5	2
93-94	--	784	461	--	31	30	14	--	2	0
94-95	--	1,104	539	--	42	23	15	--	3	1
95-96	--	987	871	--	36	35	24	--	4	0
96-97	--	1,022	528	--	33	30	25	--	13	2

DEER HERD UNIT #16B

SOUTH BOOK CLIFFS

Status: Manage the mule deer population for optimum herd size compatible with forage resources and existing land uses, with emphasis on maintaining a diverse buck age structure with representation of several age classes. Consider various publics in managing deer to provide a diversity of hunting and viewing experiences.

Management Objective: Target winter herd size objective - a modeled target population of 5,000 deer
Buck harvest objective - 450 bucks
Herd composition objective - 15 bucks per 100 does observed postseason, with thirty percent of the observed bucks three point or better
Maintain and protect 242,350 hectares of deer habitat which will support target herd objectives
Encourage land managing agencies to improve critical deer habitats
Continue to improve the Nash Wash Wildlife Management Area to provide quality fall, winter, and spring ranges for deer

Problems & Strategies: - Monitoring strategies - Target winter herd size will be monitored using population modeling based on harvest, production, and survival estimates. Harvest will be monitored through telephone surveys and hunter checking stations. Composition will be monitored with postseason and spring classification counts.

- Buck Harvest Strategies - Buck harvest will remain under the 11,000 hunter cap for the southeastern region until 1997. Hunters will distribute themselves throughout the region. If target objective, are not met by 1997 one or more of the following strategies will be initiated: 1) Reduce regional hunter cap 2) Shorten season length 3) Divide region to distribute regional cap more uniformly 4) Access management or 5) Limited entry by unit.

Antlerless harvest - as needed.

- Depredation Management Strategies - Depredation on private lands will be handled on an individual basis following division policies and guidelines.

Predator management strategies - While deer numbers are below target objectives, predator seasons and permits will be liberal in nature. Once target objectives are reached predator management will resume under current harvest goals and population objectives.

- Monitor range health with use of inter-agency range trend studies, pellet group transacts, and annual range evaluations conducted cooperatively with land managing agencies, sportsmen, land owners, and Division of Wildlife Resources.

Assist land managing agencies in planning and funding worth while habitat projects. Encourage and support land use changes that will benefit deer habitat.

- The mouths of the major drainages comprise the majority of the critical deer use areas in unit 16-B. The purchase of the Cunningham Ranch was a key purchase for the future of the deer heard. Diamond Canyon, Cottonwood Canyon and Hay Canyon are three areas that are as important as the Nash Wash purchase of optimum management flexibility. Purchase or easement of these private lands should be pursued.

DEER HERD UNIT 16B - SOUTH BOOK CLIFFS (continued)**CLASSIFICATION DATA**

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		372	654	--	47	40	28	--	17	8
93-94		328	674	--	31	30	23	--	4	1
94-95		308	486	--	25	24	25	--	5	2
95-96		275	539	--	20	19	17	--	7	1
96-97		608	519	--	28	25	15	--	15	5

CLASSIFICATION DATA

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
SOUTHEASTERN REGION	68	42	3	14	
Sego Canyon (6,000)	78	46	102	48	
Westwater (6,700)	66	49	31	3	
Bar-X	66	69	62	23	
Nash Enclosure	86	62	68	108	
Average	73	54	53	39	
NORTHEASTERN REGION					
Brewer Canyon (7,000)	102	132			
Indian Ridge (7,000)	69	--			
Wood Canyon (7,000)	94	--			
Broom Canyon (7,100)	--	--			
Big Park (in) (7,200)	108	166			
Big Park (out) (7,200)	77	160			
Horse Point Airstrip (7,200)	17	--			
Lower McCook (in) (7,200)	108	129			
Lower McCook (out) (7,200)	68	93			
McCook Chaining (7,200)	3	--			
Blvd. Ridge (7,400)	--	--			
Winter Ridge (in) (7,400)	18	--			
Winter Ridge (out) (7,400)	12	--			
Average	61				

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #17

SALT LAKE

Status: Loss of winter range to urban sprawl continues to be the primary concern for the future of this deer herd. Winter range areas available during a severe winter have been almost completely developed. Deer-automobile accidents are a constant drain on deer numbers and nuisance deer complaints are a common occurrence. The 1996-97 winter was relatively mild and little winter loss occurred. Harvest increased slightly in 1996 but the unit remains below it's management objective.

Management Objectives:

Target Winter Herd Size - Modeled population of 2000 deer.

Buck Harvest - 110 yearlings and 90 older deer.

Strategies:

Manage Salt Lake county portion as an "archery only" area. Improve harvest data collection to better define the results of this regulation.

Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.

Minimize crop depredation, residential nuisance problems and highway mortality by maintaining a population the remaining winter range can support.

Read permanent range trend studies on a 5 to 7 year rotation.

Plan and execute habitat improvement projects on critical areas.

BOUNDARY DESCRIPTION

Salt Lake and Summit counties - Boundary begins at the junction of Interstates 15 and 80 in Salt Lake City; then easterly on I-80 to Highway US-40; southerly on US-40 to the Summit-Wasatch county line; southwesterly along this county line to the Salt Lake-Wasatch county line; southwesterly along this county line to the Salt Lake-Utah county line; southwesterly along this county line to I-15; northerly on I-15 to I-80.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	32,558	28	3,711	15
Forest Service Wilderness	27,930	24	8,858	34
Bureau of Land Management	277	< 1	120	< 1
Private	52,715	46	13,107	51
State of Utah	797	< 1	0	0
TOTAL	114,273	100	25,796	100

* Utah State Geographic Information Database -- August 1995.

DEER HERD UNIT 17 - SALT LAKE (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	1,924 277	653 0	137	653 137	34 49	general 300	general 300
1993	No Data					general	general
1994	69 222	20 12	?	20 12	29 5	general archery*	general archery*
1995	113 451 201	44 51 23	?	44 51 23	39 11 11	general archery* muzzleldr.	general archery* muzzleldr.
1996	340 527 12	77 50 6	?	77 50 6	23 9 50	general archery* muzzleldr.	general archery* muzzleldr.

* Either sex archery hunt (archery only area)

CLASSIFICATION DATA

Sample Size			Fawns/100 Does	Fawns/100 Adults		Bucks/100 Does	Bucks> 2pt/100 does
Year	Post	Spr.	Post	Post	Spr	Post	Post
93-94		40			75		
94-95	126	252	52	51	64	1	0
95-96		187			61		
96-97	182	72	70	58	47	22	8

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #18

HEBER

Status: The deer population on this unit increased significantly during 1996 and is very near or may exceed the population objective at this time. The 1996 buck harvest totaled 1387, a figure well above the harvest objective. Forty eight percent of harvested bucks were at least 2 ½ years of age, a figure also in excess of the objective. This unit also met the objectives relating to herd composition itemized below. The 1996-97 winter was not overly severe and winter loss was not serious. Habitat loss, however, from housing developments etc. is rapidly accelerating and a gradual type conversion from browse to grass-forb dominated ranges continues. The future is in doubt!

Management Objectives:

Target Winter Herd Size - Modeled population of 9,300 deer.
 Buck Harvest - 550 yearlings and 450 older deer.
 Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.
 Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 45% of harvested bucks to be 2 ½ years of age or older.
 Maintain a stable or improving range trend on the winter range.

Strategies:

Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.
 Minimize crop depredation, residential nuisance problems and highway mortality by maintaining a population the remaining winter range can support.
 Read permanent range trend studies on a 5 to 7 year rotation.
 Plan and execute habitat improvement projects on critical areas. Implement the land management measures specified by the habitat management plan for the Wallsburg Wildlife Management Area.

BOUNDARY DESCRIPTION

Wasatch County - Boundary begins at the junction of Highways US-40 and SR-32; then easterly on SR-32 to Highway SR-35; southeasterly on SR-35 to the Provo River-Duchesne River drainage divide at Wolf Creek Summit; southwesterly along this drainage divide to Heber Mountain and the Strawberry River-Daniels Creek drainage divide; southerly along this drainage divide to Daniels Pass and US-40 at its junction with Forest Service road 308; southwesterly on this road to Buck Springs on the Utah-Wasatch county line; northwesterly along this county line to the Wasatch-Salt Lake county line; northeasterly along this county line to the Wasatch-Summit county line; northeasterly along this county line to US-40; southerly on US-40 to SR-32.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	82,735	43	1,189	1
Bureau of Land Management	1,223	< 1	2,112	2
Private	92,357	48	66,409	68
State of Utah	4,895	2	3,564	4
Utah Division of Wildlife Resources	1,061	< 1	9,939	10
State Parks and Monuments	10,474	5	12,551	13
USDI Bureau of Reclamation	0	0	2,254	2
TOTAL	192,745	100	98,018	100

* Utah State Geographic Information Database -- August 1995

DEER HERD UNIT 18 - HEBER (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	5,904 220	1,839 0	179	1,839 179	31 81	general 250	general 250
1993	2,200 113	121 0	32	121 32	6 29	general 150	general 150
1994	1,127	237		237	21	general	general
1995	2,046 761 255	452 97 37		452 97 37	22 13 15	general archery muzzleldr.	general archery muzzleldr.
1996	4,478 1,067 249	1,196 131 60		1,196 131 60	25 12 24	general archery muzzleldr.	general archery muzzleldr.

*Archery ** Muzzleloader

CLASSIFICATION OF BUCK HARVEST

		Age (%)		Age (%)		Age (%)	
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1995	29	70	4.1	23	6.4	7	7.0
1996	80	53	3.9	36	6.5	11	6.8
1997							

CLASSIFICATION DATA

Sample Size			Fawns/100 does	Fawns/100 Adults		Bucks/100 does	Bucks > 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	1,331	568	58	54	3	7	1
93-94	193	564	52	50	31	3	1
94-95	742	648	70	65	57	7	2
95-96	405	963	67	59	61	13	4
96-97	520	1156	75	65	52	15	5

DEER HERD UNIT #19

TIMPANOGOS

Status: Deer numbers increased significantly in 1996 and total harvest is approaching the management objective. The age structure of harvested bucks, however, remains slightly below objective with 38% of bucks being 2½ years of age or older. Postseason buck/doe ratios are also below the objective. Loss of winter range to development and a continued ecological trend toward grass-forb dominated range continues to greatly impact this deer herd. Conflicts between deer and residential development are a constant problem. The 1996-97 winter was relatively mild and no significant winter loss occurred. Fawn production is improving and should help this unit reach it's population objective in 1997-98.

Management Objectives:

Target Winter Herd Size - Modeled population of 5,300 deer.
Buck Harvest - 330 yearlings and 270 older deer.
Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.

Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 45% of harvested bucks to be 2 ½ years of age or older.

Maintain a stable or improving range trend on the winter range.

Strategies:

Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.

Minimize crop depredation, residential nuisance problems and highway mortality by maintaining a population the remaining winter range can support.

Read permanent range trend studies on a 5 to 7 year rotation.

Plan and execute habitat improvement projects on critical areas.

BOUNDARY DESCRIPTION

Utah County - Boundary begins at the junction of Interstate 15 and the Salt Lake-Utah county line; then northeasterly along this county line to the Utah-Wasatch county line; southeasterly along this county line to the Provo River; southwesterly along this river to Utah Lake; west across this lake to Highway SR-68; north on SR-68 to Highway SR-73; easterly on SR-73 to I-15; northerly on I-15 to the Salt Lake-Utah county line.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	25,102	44	8,620	26
Forest Service Wilderness	23,619	41	7,356	22
Private	8,154	14	15,262	45
Utah Division of Wildlife Resources	79	< 1	2,286	7
U.S.D.I. - National Park Service	230	< 1	5	< 1
TOTAL	57,184	100	33,529	100

* Utah State Geographic Information Database - August 1995.

DEER HERD UNIT 19 - TIMPANOGOS (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	2,807 227	811 0	0 144	811 144	29 63	general 250	general 250
1993	1,522	255	0	255	17	general	general
1994	919	318	0	318	35	general	general
1995	861 159 218	241 25 34		241 25 34	28 16 16	general archery muzzleldr.	general archery muzzleldr.
1996	1,742 191 157	486 13 60		486 13 60	28 7 38	general archery muzzleldr.	general archery muzzleldr.

CLASSIFICATION OF BUCK HARVEST

		Age (%)		Age (%)		Age (%)	
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1995	29	70	4.1	23	6.4	7	7.0
1996	52	62	4.5	19	6.1	19	6.6
1997							

CLASSIFICATION DATA

Sample Size			Fawns/100Does	Fawns/100 Adults		Bucks/100 Does	Bucks> 2pt/100 Does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	1,088	433	63	59	18	7	2
93-94	336	505	54	49	32	9	2
94-95	1,018	530	77	71	61	8	3
95-96	544	773	66	61	59	8	2
96-97	851	932	87	80	66	9	2

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #20

HEASTON

Status: This deer population continues to struggle. Although some improvement was noted in 1996, buck harvest and the total population size both remain well below management objectives. The buck/doe ratio improved this past year to a point where some of the herd composition objectives are beginning to be met. A major problem, however, is a lack of good data, especially check station measurements of buck age structure in the harvest. Severely limited access for deer hunting and harvest, especially on the north half of the unit, is also a management concern. This may improve with the recent establishment of the Heaston East CWMU and a land exchange between the BLM and Kennecott Utah Copper Corporation (KUCC) . Range condition is generally below optimum and may be limiting production and survival. A large rehabilitation project on the Carr Fork WMA near Tooele and a reduction in elk numbers and livestock use on KUCC property should help in this regard.

Management Objectives:

Target Winter Herd Size - Modeled population of 6,600 deer.
 Buck Harvest - 660 yearlings and 540 older deer.
 Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.
 Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 45% of harvested bucks to be 2 ½ years of age or older.
 Maintain a stable or improving range trend on the winter range.

Strategies:

- Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.
- Minimize crop depredation, residential nuisance problems and highway mortality by maintaining a population the remaining winter range can support. Make a special effort to alleviate or prevent the highway hazard on SR-111 in the Magna area.
- Read permanent range trend studies on a 5 to 7 year rotation.
- Plan and execute habitat improvement projects on critical areas. Carry out the habitat improvement and property maintenance measures identified in the habitat management plan for the Carr Fork WMA.
- Attempt to deal with the hunter access problem on the unit through cooperative agreements with landowners such as Big Game Posted Hunting Units.

BOUNDARY DESCRIPTION

Salt Lake, Utah and Tooele counties - Boundary begins at the junction of Highways I-15 and I-80; then southerly on I-15 to Highway SR-73; westerly on SR-73 to Highway SR-36; northerly on SR-36 to I-80; easterly on I-80 to I-15.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Bureau of Land Management	21,689	21	28,226	25
Private	74,822	72	58,479	51
State of Utah	4,731	4	7,548	7
Military Reservation	2,961	3	19,637	17
TOTAL	104,203	100	113,890	100

* Utah State Geographic Information Database -- August 1995.

DEER HERD UNIT 20 - HEASTON (continued)

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1993	2,200	355	0	355	16	general	general
	40	0	21	21	53	40	40
	40	0	33	33	81	40	40
	94	0	57	57	61	100	100
1994	1,907	520	0	520	27	general	general
	23	0	15	15	62	25	25
	23	0	21	21	83	25	25
1995	1,353	438		467	32	general	general
	285	18		18	6	archery	archery
	106	6		6	6	muzzleldr.	muzzleldr.
	30	--	29	29	97	30	30
1996	1,521	477		477	31	general	general
	249	23		23	9	archery	archery
	146	35		35	24	muzzleldr.	muzzleldr.
	24		13	13	54	25(dep. pool)	25(dep. pool)
	27		18	18	65	30	30

CLASSIFICATION OF BUCK HARVEST

		Age (%)		Age (%)		Age (%)	
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts.	Prime	Mean Antler Pts.
1994	19*	32		68			
1995	22*	45		55			
1996	no data						
1997							

* Data is from the Harker Canyon (KUC) Check Station. No differentiation was made between 2 ½ and prime deer.

CLASSIFICATION DATA

Sample Size			Fawns/100 does	Fawns/100 Adults		Bucks/100 does	Bucks > 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	221	300	69	66	35	4	--
93-94	171	643	42	38	20	4	--
94-95	289	356	56	53	36	6	2
95-96	252	257	51	48	58	6	2

96-97	336	401	68	59	54	15	7
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* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #21

STANSBURY

Status: The Stansbury unit continues to have a low density deer population although harvest inched closer to the objective during 1996. Fawn production and survival, however, remain below levels where any significant herd growth can occur. The unit also remains below objectives for postseason buck/doe ratio and for age structure of harvested bucks. A predator management plan was prepared for this unit and a more intensified coyote control program has been undertaken by the Animal and Plant Health Inspection Service (Wildlife Services Division) in an effort to improve fawn survival. Work began in April, 1996 and will continue for at least three years while a more comprehensive effort is made to monitor fawn production and survival.

Management Objectives:

Target Winter Herd Size - Modeled population of 4,000 deer.
 Buck Harvest - 330 yearlings and 270 older deer.
 Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.
 Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 45% of harvested bucks to be 2 ½ years of age or older.
 Improve chronically low fawn production and survival to allow for at least moderate herd growth.
 Maintain a stable or improving range trend on the winter range.
 Develop added water sources, especially on the summer range.

Strategies:

- Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.
- Minimize crop depredation, residential nuisance problems and highway mortality.
- Read permanent range trend studies on a 5 to 7 year rotation.
- Plan and execute habitat improvement projects on critical areas.
- Prepare, have approved and implement a predator management plan specific to this unit and implement it using the resources of APHIS-Animal Damage Control.
- Construct additional wildlife "guzzlers" at strategic locations.

BOUNDARY DESCRIPTION

Tooele County - Boundary begins at the junction of Highways I-80 and SR-36; then southerly on SR-36 to the Pony Express road; westerly on this road to the Skull Valley-Dugway road; northerly on this road to Dugway and Highway SR-199; westerly on SR-199 to "Baker Area" within the Dugway Proving Ground; northerly on the main dirt road (Hall road) paralleling the west side of the Cedar Mountains to the "Clive" exit on I-80; easterly on I-80 to SR-36.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	0	0	35,985	37	11,222	10
Forest Service Wilderness Area	0	0	18,773	19	2,623	3
Bureau of Land Management	111,047	75	25,967	27	58,221	54
Private	8,937	6	12,677	13	28,468	26
State of Utah	3,971	2	3,892	4	4,872	4
Indian Reservation	0	0	0	0	2,873	3

U.S. Department of Defense	24,867	17	0	0	0	0
TOTAL	148,822	100	97,294	100	108,279	100

DEER HERD UNIT 21 - STANSBURY (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters afield	Buck	Antlerless	Total	%Succ.	Auth.	Sold
1992	1,790	363	0	363	20	general	general
1993	1,737	181	0	181	10	general	general
1994	1,023	150	0	150	150	general	general
1995	1,362 159 60	236 40 6	0	236 40 6	17 25 10	general archery muzzleldr.	general archery muzzleldr.
1996	1 340 59 181	331 23 15		331 23 15	25 39 8	general archery muzzleldr.	general archery muzzleldr.

CLASSIFICATION OF BUCK HARVEST

		Age (%)		Age (%)		Age (%)	
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1990	58	71	3.0	19	4.5	10	6.3
1991	69	60	3.0	30	4.8	10	4.9
1992	67	57	3.1	24	4.9	19	6.5
1995	35	69	3.5	15	5.3	14	7.0
1996	29	71	3.8	25	6.2	4	8.0
1997							

Data is from the Stansbury (Grantsville) Check Station.

CLASSIFICATION DATA

Sample Size			Fawns/100 does	Fawns/100 Adults		Bucks/100 does	Bucks > 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	114	90	64	61	20	4	0
93-94	121	384	46	44	22	5	0
94-95	138	126	48	47	39	3	1
95-96	91		59	54		6	2
96-97	85	146	44	42	49	5	2

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #22

NORTH WEST DESERT

Status: This unit improved some in terms of harvest in 1996 but the overall population remains well below objective. Although the unit encompasses several desert mountain ranges, the great bulk of favorable deer habitat and the deer population occurs on the Deep Creek range. This area is so remote and distant that little classification data is collected. Our sense, however, is that the Deep Creek range is experiencing the same problems related to fawn production and survival as other west desert mountain ranges. Terrain and a lack of roads severely limit access to this area. Access will be further limited by a large expansion of the Goshute Indian Reservation recently enacted by Congress.

Management Objectives:

Target Winter Herd Size - Modeled population of 2,000 deer.

Buck Harvest - 165 yearlings and 135 older deer.

Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.

Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 45% of harvested bucks to be 2 ½ years of age or older.

Strategies:

Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.

Read permanent range trend studies on a 5 to 7 year rotation.

Construct additional wildlife "guzzlers" at strategic locations.

BOUNDARY DESCRIPTION

Tooele and Juab counties - Boundary begins at the junction of the Utah-Nevada state line and Highway I-80; then easterly on I-80 to the "Clive" exit; southerly on the main dirt road (Hall road) paralleling the west side of the Cedar Mountains to "Area Baker" within the Dugway Proving Ground and Highway SR-199; easterly on SR-199 to Dugway and the Dugway-Skull valley road; southerly on this road to the Pony Express road; southwesterly on this road to the Dugway Valley road; southerly on this road to Highway SR-174; southeasterly on SR-174 to the Juab-Millard county line; westerly along this county line to the Utah-Nevada state line; northerly along this state line to I-80.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area(acres)	%
Bureau of Land Management	115,642	87	47,222	72	132,685	36
Private	112	< 1	2,984	4	69,737	18
State of Utah	14,353	11	11,732	18	170,151	44
Indian Reservation	2,855	2	3,716	6	9,418	2
TOTAL	132,962	100	65,654	100	381,991	100

* Utah State Geographic Information Database -- August, 1995.

DEER HERD UNIT 22 - NORTH WEST DESERT (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	762	157	0	157	21	general	general
1993	456	47	0	47	10	general	general
1994	370	69	0	69	19	general	general
1995	398	54	0	54	14	general	general
	29	4		4	14	archery	archery
	447	61		61	14	muzzleldr.	muzzleldr.
1996	482	111		111	23	general	general
	10	7		7	70	archery	archery
	70	11		11	16	muzzleldr.	muzzleldr.

CLASSIFICATION OF BUCK HARVEST

		Age (%)		Age (%)		Age (%)	
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1990							
1991							
1992							
1995							
1996							
1997							

CLASSIFICATION DATA

Sample Size			Fawns/100 does	Fawns/100 Adults		Bucks/100 does	Bucks > 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
93-94	76	--	41	27	--	54	0
94-95	--	--					
95-96	15	--	71	50	--	43	0
96-97	--	--					

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #23

VERNON

Status: The harvest survey indicates that buck harvest and percent hunter success both improved in 1996. The population remains below objective as do other desert mountain range units. Similar to the adjacent Tintic, Stansbury and Northwest Desert units, the Vernon unit exhibits very poor fawn production and survival. Predation on fawns is a major problem. A predator management plan was prepared in February, 1996 and implementation began in April with the destruction of several coyote dens in the immediate vicinity of the prime fawn rearing areas. Hopefully this effort will begin to have some beneficial effect in a few years. An attempt to implement the strategy in the deer management plan calling for elimination of Limited Entry hunting failed in 1997. The unit is now closed to deer hunting for an indefinite period.

Management

Objectives: Target Winter Herd Size - Modeled population of 3,800 deer.
Buck Harvest - 330 yearlings and 270 older deer.
Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.

Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 45% of harvested bucks to be 2 ½ years of age or older.

Strategies: Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.

Consider termination of the special limited entry status of this unit and inclusion into a larger limited entry unit when statewide limited entry hunting is adopted.

Read permanent range trend studies on a 5 to 7 year rotation.

Improve chronically low fawn production and survival to allow for at least moderate herd growth.

Prepare, have approved and implement a predator management plan specific to this unit and implement it using the resources of APHIS-Animal Damage Control.

BOUNDARY DESCRIPTION

Tooele, Juab and Millard Counties - Boundary begins at Highway SR-36 and the Pony Express road; then southeasterly on SR-36 to highway US-6; southwesterly on US-6 to highway SR-174 (i.e. the IPP road); northwesterly on SR-174 to the Dugway Valley road; northerly on this road to the Pony Express road; northeasterly on this road to SR-36.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	0	0	51,734	57	14,729	9
Bureau of Land Management	24,765	90	22,058	24	99,548	61
Private	0	0	9,221	10	25,377	16
State of Utah	2,667	10	6,853	8	13,193	8
Bankhead Jones	0	0	1,265	1	10,273	6
TOTAL	27,432	100	91,131	100	163,120	100

* Utah State Geographic Information Database -- August, 1995.

DEER HERD UNIT 23 - VERNON (continued)**HARVEST SUMMARY**

		Harvest				Permits		
Year	Hunters afield	Buck	Antlerless	Total	% Succ.	Type	Auth.	Sold
1994	268	104	0	104	39	general	275	271
	unk.	unk.	0	unk.	unk.	archery	60	60
	40	12	0	12	30	muzzleldr.	44	43
	unk.	unk.	0	unk.	unk.	Landowner	36	36
1995	273	102	0	102	37	general	275	275
	47	0	0	0	0	archery	60	60
	44	5	0	5	11	muzzleldr.	44	44
	34	11	0	11	32	Landowner	34	34
1996	272	183	0	183	67	general	275	275
	51	22	0	22	43	archery	61	61
	36	18	0	18	50	muzzleldr.	44	44
	33	27	0	27	82	Landowner	35	35

CLASSIFICATION OF BUCK HARVEST

		Age(%)		Age (%)		Age (%)	
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1992	80	30	3.0	47	5.7	23	5.5
1993	42	8	4.0	68	5.2	24	5.6
1994	14	50	3.7	14	4.5	36	7.2
1995	14	57	3.9	0	--	43	6.5
1996	no data						

Data is from the Vernon and other check stations and field bag checks.

CLASSIFICATION DATA

Sample Size			Fawns/100 does	Fawns/ 100 Adults		Bucks/100 does	Bucks> 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
93-94	90	140	42	41	22	2	0
94-95	147	151	54	44	12	21	6
95-96	215		66	60		9	3
96-97	59	182	84	79	43	6	3
97-98							

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #24

TINTIC

Status:

Buck harvest almost doubled on this unit in 1996, suggesting that some population growth is occurring. Based on this criterion, the unit may be at or very near it's population objective. Fawn production, however, has remained at a low level and it is difficult to account for any growth in the deer herd that could produce this large an increase in harvest. Improved check station information is necessary if we are to better monitor this unit. A lack of productive summer range which can produce high quality forage is a serious limiting factor on this unit. More that 100,000 acres of the unit burned during the summer of 1996. These areas were reseeded and may offer better forage quality in the future.

Management Objectives:

Target Winter Herd Size - Modeled population of 4,400 deer.
 Buck Harvest - 275 yearlings and 225 older deer.
 Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.
 Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 45% of harvested bucks to be 2 ½ years of age or older.
 Preserve and enhance critical summer range areas with rehabilitation projects and water developments.

Strategies:

- Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.
- Read permanent range trend studies on a 5 to 7 year rotation.
- Improve chronically low fawn production and survival to allow for at least moderate herd growth.
- Investigate the winter migrational patterns of this deer herd. Deer leaving the area in the fall and not returning until late spring make it difficult to collect meaningful data.
- Construct additional wildlife guzzlers at strategic locations.

BOUNDARY DESCRIPTION

Juab, Millard, Utah and Tooele counties - Boundary begins at the junction of Highways US-6 and I-15 at Santaquin; then southwesterly on I-15 to the Sevier River; northwesterly along this river to Highway SR-132; southwesterly on SR-132 to US-6; northeasterly on US-6 to Highway SR-36; northerly on SR-36 to Highway SR-73; easterly on SR-73 to Highway SR-68; southerly on SR-68 to US-6; easterly on US-6 to I-15.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Bureau of Land Management	13,131	55	46,372	49	135,647	53
Private	1,951	8	43,446	46	103,967	41
State of Utah	8,812	37	4,742	5	14,289	6
Utah Division of Wildlife Resources	0	0	0	0	760	< 1
Bankhead Jones	0	0	0	0	28	< 1
TOTAL	23,894	100	94,560	100	254,691	100

* Utah State Geographic Information Database -- August, 1995.

DEER HERD UNIT 24 - TINTIC (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	2,976 100	714 0	0 94	714 94	24 94	general 100	general 100
1993	2,367	362	0	362	15	general	general
1994	1,496	295	0	295	20	general	general
1995	1,244 162 223	261 29 32	0 0 0	261 29 32	21 18 14	general archery muzzleldr.	general archery muzzleldr.
1996	1,980 113 220 1	553 35 61 --	0 0 0 4	553 35 61 4	25 31 28 100	general archery muzzleldr. mitigation	general archery muzzleldr. mitigation

* Rifle Hunt ** Archery Hunt ***Muzzleloader Hunt.

CLASSIFICATION OF BUCK HARVEST

		Age (%)		Age (%)		Age (%)	
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1994	2	100	2.0	--	--	--	--
1995	10	60	2.7	40	4.5	--	--
1996	5	100	3.8	--	--	--	--

Data is from check stations and field bag checks.

CLASSIFICATION DATA

Sample Size			Fawns/100does	Fawns/ 100 Adults		Bucks/100 does	Bucks> 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	210	74	48	45	30	7	3
93-94	172	220	49	46	38	6	2
94-95	212	398	53	53	38	1	0
95-96	183	270	48	46	53	3	0
96-97	285	286	58	55	54	5	1

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #25

NORTH NEBO

Status: This very important deer unit remains well below it's target population objective. Buck harvest, however, improved in 1996 to slightly more than 50% of the harvest objective. Fawn production was similar to 1995 but overwinter survival of fawns to the spring of 1997 was markedly better. This unit is now meeting the objectives for herd composition except for a failure to have 45% of the buck harvest be older than 2 ½ years of age.

Management

Objectives: Target Winter Herd Size - Modeled population of 13,000 deer.
Buck Harvest - 825 yearlings and 675 older deer.
Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.

Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 45% of harvested bucks to be 2 ½ years of age or older.

Preserve and enhance important winter range areas with rehabilitation projects and conservation easements etc..

Strategies:

Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.

Read permanent range trend studies on a 5 to 7 year rotation.

Implement the habitat management measures identified in the North Nebo and Spencer Fork WMA habitat management plans.

Continue to pursue consummation of a conservation easement in the Fountain Green/Moroni area. This easement is now in the appraisal stage.

Maintain the cougar population at a level that will allow deer herd recovery.

BOUNDARY DESCRIPTION

Juab, Sanpete and Utah counties - Boundary begins at the junction of Highway I-15 and the Provo River; then westerly along this river to Utah Lake; due west across this lake to Highway SR-68; southerly on SR-68 to Highway US-6; easterly on US-6 to I-15; southerly on I-15 to Highway SR-132; southeasterly on SR-132 to Highway SR-116; easterly on SR-116 to Highway US-89; northerly on US-89 to US-6; northwesterly on US-6 to I-15; northerly on I-15 to the Provo River.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	0	0	64,414	55	26,919	17
Forest Service Wilderness Area	0	0	19,147	16	6,348	4
Bureau of Land Management	82	< 1	1,448	1	10,823	7
Private	22,974	94	20,383	17	92,080	58
State of Utah	44	< 1	164	< 1	2,885	2
Utah Division of Wildlife Resources	1,302	6	11,144	10	19,562	12
TOTAL	24,402	100	116,692	100	158,617	100

* Utah State Geographic Information Database -- August, 1995.

DEER HERD UNIT 25 - NORTH NEB0 (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	4,537	1,210	0	1,210	27	general	general
1993	2,059	228	0	228	11	general	general
1994	1,687	485	0	485	29	general	general
1995	1,702	536	0	536	31	general	general
	379	58	0	58	15	archery	archery
	186	37	0	37	20	muzzleldr.	muzzleldr.
1996	2,318	700	0	700	30	general	general
	263	46	0	46	17	archery	archery
	217	60	0	60	28	muzzleldr.	muzzleldr.
	4	--	4	4	100	mitigation	mitigation

CLASSIFICATION OF BUCK HARVEST

		Age (%)			Age (%)		
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1992	59	71	--	24	--	5	--
1993	11	27	--	36	--	36	--
1994	46	79	4.0	10	5.7	11	5.7
1995	52	81	3.7	13	5.6	6	8.0
1996	115	68	3.9	24	6.4	8	6.6

Data are from check stations and field bag checks.

CLASSIFICATION DATA

Sample Size			Fawns/100 does	Fawns/ 100Adults		Bucks/100 does	Bucks> 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	621	208	74	69	21	6	1
93-94	154	969	61	57	28	7	1
94-95	703	950	54	51	47	5	3
95-96	416	650	81	76	49	7	0
96-97	466	2065	78	66	64	18	9

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #26

SOUTH NEBO

Status: Buck harvest more than doubled in 1996 but is still only 68% of the harvest objective. We are likewise not meeting the objectives for postseason buck/doe ratio or the percent of 2 ½ year or older deer in the harvest. Deer numbers increased in 1996 but at least one to two more favorable moisture years are needed. Predation is also a problem on this unit. Cougar numbers appear to have peaked and are now well below the level of three to four years ago. Cougar permit numbers were reduced from 43 in 1997 to 30 for 1998 over the entire Nebo management unit. Coyote numbers, however, remain high and will continue to limit fawn survival.

Management

Objectives: Target Winter Herd Size - Modeled population of 9,600 deer.
 Buck Harvest - 605 yearlings and 495 older deer.
 Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.
 Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 45% of harvested bucks to be 2 ½ years of age or older.

Strategies: Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.

Read permanent range trend studies on a 5 to 7 year rotation.

Maintain the cougar population at a level that will allow deer herd recovery.

BOUNDARY DESCRIPTION

Juab and Sanpete counties - Boundary begins at the junction of Highways US-89 and SR-116; then southwesterly on US-89 to Gunnison and the Sevier River; northerly along this river and the east shore of Sevier Bridge (Yuba) Reservoir to Highway I-15; northeasterly on I-15 to Highway SR-132; southeasterly on SR-132 to SR-116; easterly on SR-116 to US-89.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	3	< 1	50,744	53	69,930	29
Bureau of Land Management	4,735	12	7,760	8	59,465	25
Private	35,391	87	31,663	34	90,544	38
State of Utah	323	< 1	2,897	3	13,430	5
Utah Division of Wildlife Resources	230	< 1	105	< 1	6,833	3
TOTAL	40,682	100	93,169	100	240,202	100

DEER HERD UNIT 26 - SOUTH NEBO (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	3,073	811	0	811	26	general	general
1993	2,045 52	255 0	0 38	255 38	13 64	general 70	general 70
1994	1,329 91	429 0	0 38	429 38	33 35	general 100	general 99
1995	1,776 437 198	315 43 26	0 0 0	315 43 26	18 10 13	general archery muzzeldr.	general archery muzzeldr.
1996	1,552 296 292 5	604 38 111 --	0 0 0 12	604 38 111 12	39 13 38 --	general archery muzzeldr. mitigation	general archery muzzeldr. mitigation

CLASSIFICATION OF BUCK HARVEST

		Age (%)		Age (%)		Age (%)	
Year	Sample size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1992	2	100	--	0	--	0	--
1993	5	60	--	20	--	20	--
1994	2	0	--	0	--	100	7.5
1995	21	86	3.0	14	8.0	0	--
1996	78	74	4.1	19	5.7	6	6.6

Data are from check stations and field bag checks.

CLASSIFICATION DATA

Sample Size			Fawns/100 does	Fawns/100 Adults		Bucks/100 does	Bucks > 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	278	155	87	82	38	6	1
93-94	259	540	63	61	40	3	0
94-95	785	1089	63	61	46	3	1
95-96	2169	839	81	79	65	3	1
96-97	609	3122	82	78	68	6	2

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #27

DIAMOND FORK

Status: This deer herd is approaching it's target population objective. Buck harvest in 1996 increased for the fourth consecutive year to approximately 83% of the harvest objective. The herd composition objectives outlined below are all being achieved. This unit has a very attractive buck/doe ratio of 24 bucks/100 does and 10 bucks with 3 antler points or better/100 does. Development and slow ecological change on the winter range pose the greatest long-term threat to this deer herd.

Management Objectives:

Target Winter Herd Size - Modeled population of 8,800 deer.
 Buck Harvest - 700 yearlings and 300 older deer.
 Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.
 Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 30% of harvested bucks to be 2 ½ years of age or older.

Strategies:

- Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.
- Read permanent range trend studies on a 5 to 7 year rotation.
- Maintain the cougar population at a level that will allow deer herd recovery.
- Cooperate with the Uinta National Forest in a study of vegetation successional trends along the Wasatch Front.
- Continue cooperative efforts with the Uinta National Forest to complete the habitat rehabilitation project in Spanish Fork Canyon.

BOUNDARY DESCRIPTION

Utah and Wasatch counties - Boundary begins at the junction of Highways I-15 and the Provo River; then northeasterly along this river to the Utah-Wasatch county line; southeasterly along this county line to Buck Springs and Forest Service road #308; northeasterly on this 308 to Daniels Pass on Highway US-40; easterly on US-40 to the Soldier Creek Dam Road; southerly on this road to the Strawberry River; easterly along this river to Beaver Canyon; southwesterly along this canyon to Big Beaver Spring and the Big Beaver Spring road; southwesterly on this road to the Reservation Ridge road; southerly on this road to the Right Fork of the White River Road; southwesterly on this road to Highway US-6; westerly on US-6 to I-15; northerly on I-15 to the Provo River.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service			275,723	85	76,888	80
Bureau of Land Management					80	< 1
Private	5	100	43,243	14	19,436	20
Indian Reservation			3,083	1		
State of Utah					287	< 1
Utah Division of Wildlife Resources			1,543	< 1	677	< 1
TOTAL	5	100	323,592	100	97,368	100

* Utah State Geographic Information Database -- August, 1995.

DEER HERD UNIT 27 - DIAMOND FORK (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	7,997 96	1,657 0	0 87	1,657 87	21 91	general 100	general 100
1993	4,171	194	0	194	5	general	general
1994	2,432	428	0	428	18	general	general
1995	2,051 476 198	467 58 20	0 0 0	467 58 20	23 12 10	general archery muzzleldr.	general archery muzzleldr.
1996	2,571 296 170	750 35 47	0 0 0	750 35 47	29 12 28	general archery muzzleldr.	general archery muzzleldr.

CLASSIFICATION OF BUCK HARVEST

		Age (%)		Age (%)		Age (%)	
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1992	85	60	--	15	--	25	--
1993	23	26	--	43	--	31	--
1994	59	69	3.7	19	4.8	12	6.6
1995	128	79	3.8	19	4.9	2	7.0
1996	122	69	3.9	21	5.9	10	7.2

Data is from Check Station(s).

CLASSIFICATION DATA

Sample Size			Fawns/100 does	Fawns/ 100 Adults		Bucks/100 does	Bucks> 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	566	491	50	48	13	4	1
93-94	179	643	48	44	39	9	4
94-95	633	571	76	67	66	13	4
95-96	274	628	66	53	69	26	9
96-97	535	1064	96	78	58	24	10

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #28

NORTHWEST MANTI

Status: This very important deer herd is nearing or perhaps exceeding it's target population objective. The 1996 harvest totaled 1001, a figure that exceeds the harvest objective of 900. The percentage of 2 ½ year old and older deer in the harvest was 39% which exceeds the desired 30%. The postseason buck/doe ratio, however, is still below objective. Hunting pressure on this unit has steadily increased since 1993 even in the face of regional caps on hunter numbers. If this trend continues, it may become difficult to achieve the herd composition objectives specified below.

Management Objectives:

Target Winter Herd Size - Modeled population of 7,400 deer.

Buck Harvest - 585 yearlings and 315 older deer.

Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.

Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 30% of harvested bucks to be 2 ½ years of age or older.

Strategies:

Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.

Read permanent range trend studies on a 5 to 7 year rotation.

Maintain the cougar population at a level that will allow deer herd recovery.

BOUNDARY DESCRIPTION

Utah and Sanpete counties - Boundary begins at the junction of Highway US-6 and the Starvation Canyon road; then southerly on this road to the Bear Ridge road; westerly on this road to the Skyline Drive road; southerly on this road to the Spring City Canyon (Oak Creek) road; westerly on this road to Spring City and Highway SR-117; westerly on SR-117 to Highway US-89; northerly on US-89 to US-6; easterly on US-6 to the Starvation Canyon road.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service			96,365	80	30,636	25
Bureau of Land Management	54	< 1	78	< 1	1,231	1
Private	10,825	96	21,191	17	73,195	61
U.S. Dept. Of Defense					65	< 1
State of Utah			2,750	2	1,705	1
Utah Division of Wildlife Resources	435	4	823	< 1	13,708	11
TOTAL	11,314	100	121,207	100	120,540	100

* Utah State Geographic Information Database -- August, 1995.

DEER HERD UNIT 28 - NORTHWEST MANTI (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	3,896 216	883 0	0 155	883 155	23 72	general 230	general 230
1993	2,381	235	0	235	10	general	general
1994	1,589	445	0	445	28	general	general
1995	1,603 523 354	354 43 17	0 0 0	354 43 17	22 8 5	general archery muzzleldr.	general archery muzzleldr
1996	2,031 607 274	846 83 72	0 0 0	846 83 72	42 14 26	general archery muzzleldr	general archery muzzleldr

CLASSIFICATION OF BUCK HARVEST

		Age (%)		Age (%)		Age (%)	
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1992	173	60	--	15	--	25	--
1993	59	26	--	43	--	31	--
1994	108	79	3.8	10	5.9	11	6.5
1995	93	82	3.7	15	5.8	3	7.3
1996	64	61	4.2	30	6.1	9	7.5

Data are from check stations and field bag checks.

CLASSIFICATION DATA

Sample Size			Fawns/100 does	Fawns/ 100 Adults		Bucks/100 does	Bucks> 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	321	33	86	83	22	3	1
93-94	58	609	81	76	55	6	6
94-95	438	1426	71	68	68	3	2
95-96	943	1004	80	75	66	7	2
96-97	586	3205	82	74	61	10	6

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #29

SOUTHWEST MANTI

Status: This unit remains below it's target population objective in spite of a small increase in buck harvest in 1996. This year also saw a considerable increase in the percentage of older age class bucks harvested. Two short term problems, however, are immediately apparent. First, the very poor fawn production experienced in 1995 and secondly the fact some winter loss was experienced this past winter may not bode well for the 1997 hunting season. Postseason buck/doe ratio improved in 1996 to 12 bucks/100 does, a figure slightly below the management plan objective.

Management Objectives:

Target Winter Herd Size - Modeled population of 9,200 deer.

Buck Harvest - 585 yearlings and 315 older deer.

Antlerless Harvest - As needed to meet winter herd size and buck harvest objectives.

Herd Composition - Observed buck/doe ratio of 15 bucks/100 does with 30% of bucks having three or more antler points. In addition, 30% of harvested bucks to be 2 ½ years of age or older.

Strategies:

Population Monitoring - Use harvest data, classification data, checking station results and mortality estimates to periodically model the population.

Read permanent range trend studies on a 5 to 7 year rotation.

Maintain the cougar population at a level that will allow deer herd recovery.

Implement the habitat management measures identified for the various WMA's within this unit.

BOUNDARY DESCRIPTION

Sanpete County - Boundary begins at the junction of Highways US-89 and SR-117; then easterly on SR-117 to Spring City and the Spring City (Oak Creek) Canyon road; easterly on this road to the Skyline Drive road; southwesterly on this road to the White Mountain road; southwesterly on this road to the Sanpete-Sevier county line; westerly along this county line to US-89; northeasterly on US-89 to SR-117.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Yearlong range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service			105,901	98	20,660	25
Bureau of Land Management	3,958	17			6,416	8
Private	18,651	79	1,043	1	35,578	42
Utah State Parks					52	< 1
State of Utah	905	4	69	< 1	3,275	4
Utah Division of Wildlife Resources	75	< 1	1,570	1	17,695	21
TOTAL	23,589	100	108,583	100	83,668	100

* Utah State Geographic Information Database -- August, 1995.

DEER HERD UNIT 29 - SOUTHWEST MANTI (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1992	3,484 228	726 0	0 141	726 141	21 62	general 250	general 250
1993	2,059 255	355 0	0 94	355 94	17 37	general 300	general 300
1994	2,091	861	0	861	41	general	general
1995	1,805 386 77	408 119 6	0 0 0	408 119 6	23 31 8	general archery muzzleldr.	general archery muzzleldr.
1996	1,160 350 99 3	459 36 29 --	0 0 0 6	459 36 29 6	40 10 29 100	general archery muzzleldr mitigation	general archery muzzleldr mitigation

CLASSIFICATION OF BUCK HARVEST

		Age (%)		Age (%)		Age (%)	
Year	Sample Size	1.5	Mean Antler Pts.	2.5	Mean Antler Pts	Prime	Mean Antler Pts
1992	48	63	--	19	--	18	--
1993	28	57	--	25	--	18	--
1994	22	82	4.0	5	5.0	14	6.3
1995	23	70	3.6	26	6.8	4	7.0
1996	44	52	3.9	34	5.9	14	8.5

Data are from check station(s).

CLASSIFICATION DATA

Sample Size			Fawns/100 does	Fawns/ 100 Adults		Bucks/100 does	Bucks> 2pt/100 does
Year	Post	Spr	Post	Post	Spr	Post	Post
92-93	1013	585	86	79	29	8	2
93-94	950	1838	72	68	48	5	2
94-95	1601	1870	66	65	59	1	0
95-96	439	1869	40	38	40	5	1
96-97	343	2657	70	63	56	12	5

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #30

NORTHEAST MANTI

Status: Range conditions are fair. Doe-fawn ratios are improving from recent years. Harvest remains well under the objective.

Management

Objective: Manage the deer herd in a healthy condition with a population size commensurate with forage resources. A modeled population of 14,000 deer. Harvest 1,400 bucks; antlerless, as needed. Herd composition - 15 bucks: 100 does observed postseason with 30% 3x2 points or greater. Maintain and protect 5500 acres winter range, improve a minimum of 60 acres winter range annually.

Problems &

Strategies: Herd size - will be determined by computer modeling. Data input for this model will be collected through post-season classification, spring classification, spring mortality transect, and harvest surveys.

Harvest - Continue seasons and regional hunter cap numbers (11,00) as presently established. Antlerless harvest should be initiated when buck harvest objectives are reached, or as provided in III.

Depredation - Agricultural crop damage and privately owned rangeland will be minimized by using any method allowed by current state law. To date, these methods include herding, depredation permits, mitigation permits, etc.

Predator Management - Recommend liberal cougar harvest if buck harvest falls significantly below the 900 buck objective and survey trends indicate a depressed deer population.

Perform established DWR range trend studies and pellet transacts, implement the Gordon Creek WMA Habitat Management Plan, Implement the Lower Fish Creek WMA Habitat Management Plan, provide written input on the River Gas drilling project and request mitigation as necessary.

BOUNDARY DESCRIPTION

Carbon, Emery, Sanpete, Utah, and Wasatch counties - Boundary begins at Soldier Summit and Highway US-6; then southeasterly on US-6 to Highway SR-10; south on SR-10 to Highway SR-31; northwesterly on SR-31 to the Skyline Drive; northerly on the Skyline Drive to the Bear Ridge road; east on this road to the Starvation Canyon road; northerly on this road to US-6; easterly on US-6 to Soldier Summit.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	148,500	31	1,450	1
Bureau of Land Management	18,900	4	78,050	50
Private	309,850	64	27,950	18
State	7,500	2	38,550	25
Wildlife Resources	0		11,000	7
TOTAL	485,100		157,000	

DEER HERD UNIT 30 - NORTHEAST MANTI (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1993	3,148	469	0	469	15	0	
1994	1,489	391		391	26		
1995							
1996	2,502	843		843	34		

CLASSIFICATION OF HARVEST (Percent)

Bucks					Antlerless				
		Age				Age			
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1993	37	30	32	38					
1994	46	67	11	22					
1995	57	77	19	4					
1996	166	58	31	11					
1997									

DEER HERD UNIT 30 - NORTHEAST MANTI (continued)**CLASSIFICATION DATA**

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
91-92	--	312	542	--	52	49	26	--	6	1
92-93	--	520	352	--	40	38	13	--	7	1
93-94	--	379	575	--	44	41	23	--	9	4
94-95	--	666	914	--	67	61	45	--	9	5
95-96	--	292	911	--	52	44	36	--	16	6
96-97	--	409	380		53	47	40	--	13	4

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
North Springs (6,300)	22	66*		42	14
Porphyry Bench (6,300)	57*	78*	74*	29	129
Porphyry Reseeding-Cemo (6,300)	80*	49	54*	29	63
Poison Springs (6,400)	34	5	52	11	18
Slack Pile (6,500)	141	109	172	94	71
Mohrland (6,700)	106	77	185	47	106
Wiregrass Bench (7,000)	40	72	46	31	23
Long Bench (7,200)	18*	51	29	31	14
Cedar Bench (7,300)	60	95	77	58	80
Horse Bench (7,300)	18		11	9	17
Telephone Bench (7,500)	12	18	42	14	23
Average	53	62	74	36	51

* Sheep use on transect

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #31

SOUTHEAST MANTI

Status: This deer herd is well below the management objective. Fawn production has been between 45 and 55 for four years, therefore, total numbers are down. Hunter numbers in 1994 were only 3,990 of the management objective.

Management

Objective: Manage the deer herd for optimum herd size compatible with the range and existing land uses.
 Manage for a diverse age structure of bucks in the population.
 Target winter heard size, a modeled winter population of 9,000 deer
 Harvest objective; buck harvest of 900, antlerless, as needed
 Herd composition objective; maintain at least 15 bucks per 100 does observed postseason, 30% of which are to be 3-point or better
 Winter range; maintain the quantity and quality of existing winter range. Improve the quality of a minimum of 600 acres of winter range annually
 Summer range; improve the quality of a minimum of 300 acres of summer range annually

Problems &

Strategies: Harvest strategy; Until 1997, maintain the existing buck hunt strategy of 11,000 buck hunters in the Southeastern Region, with hunters allowed to hunt any open unit in the region. If the herd composition objective has not been met by 1997 initiate one or more of the following strategies to insure that the objective is met: reduce regional hunter numbers, shorten season length, divide region into two areas with separate hunter caps, access management, or limited entry by unit.
 Monitoring; Populations and herd composition will be monitored though post season and spring classifications, harvest surveys, hunter checking stations, and computer modeling.
 Depredation; Depredation problems will be handled on a case by case basis according to established DWR policies.
 Predator Management; Assistance will be sought from ADC to control coyotes during times of very low deer numbers when predation can slow the recovery of the population. Liberal cougar harvest will also be recommended when deer populations are very low.
 Winter range; Monitor the condition of the winter range with DWR range trend studies and Forest Service Cole transacts. Utilize antlerless harvest to protect ranges that are degrading due to overuse by deer. Cooperate with Federal land managers on improvement projects through funding and manpower.
 Summer range; Cooperate with the Forest Service on projects designed to protect aspen habitats from encroachment by conifer.

BOUNDARY DESCRIPTION

Emery, Sanpete, and Sevier counties - Boundary begins at the junction of Highways SR-10 and SR-31; then northwesterly on SR-31 to the Skyline Drive; south on the Skyline Drive to the White Mountain road; south on this road to the Manti-LaSal/Fishlake National Forest boundary; east along this boundary to Quitcupah Creek; southeasterly along this creek to SR-10; north on SR-10 to SR-31.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	238,100	91	131,100	72
Bureau of Land Management	2,600	1	38,000	21
Private	14,700	6	8,000	4
State	5,600	2	5,900	3
TOTAL	261,000	100	183,000	100

DEER HERD UNIT 31 - SOUTHEAST MANTI (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1993	1,609	188	0	188	12	0	
1994	1,258	443		443	35		
1995							
1996	1,402	411	0	411	29		

CLASSIFICATION OF HARVEST

Percent

Bucks					Antlerless				
		Age					Age		
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1993	16	38	25	37					
1994	20	65	15	20					
1995	19	63	37	0					
1996	65	55	23	22					

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	274	520	--	55	50	24	--	11	3
93-94	--	252	524	--	41	38	33	--	9	2
94-95	--	283	461	--	54	51	34	--	6	2
95-96	--	177	727	--	45	39	37	--	14	6
96-97	--	263	858	--		71	53	--	13	5

DEER HERD UNIT 31 - SOUTHEAST MANTI (continued)**PELLET GROUP TREND**

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Buzzard Bench (6,300)	18	22	26	5	71
Lower Grimes Wash (6,300)	60	28	74	21	54
Rock Canyon (6,400)	12	0	15	2	43
Howard-Forest Service (6,600)	85	45	57	57	154
Stump Flat #2* (6,600)	15	21	13	7	0
North Church Mine Road (6,600)	15	18	13	15	19
East Side Joe's Valley (7,200)	65	15	80	34	15
Game Range Project (7,400)	20	0	11	11	6
Biddlecomb Ridge (8,000)	0	2	4	2	3
Mahogany Pt. (8,500)	11	24	21	38	13
South Trail (8,500)	8	2	0	0	6
Reynold's Pt. (9,000)	17	18	12	17	10

PELLET GROUP TREND (continued)

	92-93	93-94	94-95	95-96	96-97
South Trail Terrace (9,000)	26	11	29	5	23
South Trail Reseeding (9,100)	3	2	6	32	2
Black Dragon (7,200)	28	11	29	41	21
Herring Flat (6,130)	16	11	17	20	8
Muddy Creek (6,500)	68	3	9	1	14
Lower Ferron Dugway (7,200)	62	35	168	13	88
Birch Creek Chaining (7,400)	9	9		15	29
Dry Mountain (7,800)	72	75	47	95	82
Hole Trail (7,800)	16	4	5	3	68
Wildcat Knolls (8,700)	1	7	4	0	0
Lower Dry Wash	42	11	25	5	0
Ferron Canyon	62	58	68	64	91
Pines Knoll	1	5	2	0	0
Average	25	17	31	24	35

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #32

RANGE CREEK

Status: Doe fawn ratios show a slight increase over recent year. Winter mortality was light in 94-95. Buck harvest is well below management objectives.

Management

Objective: Manage the deer herd in a healthy condition with a population size commensurate with forage resources and existing land uses. A modeled winter population of 6,000 deer. Depending on fawn production and winter survival. Harvest, 600 bucks annually, antlerless as needed. Herd composition - 15 bucks: 100 does observed postseason with 30% 3x2 points or greater.

Problems &

Strategies: Herd size - will be determined by computer modeling. Data input for this model will be collected through post-season classification, spring classification and harvest surveys.

Harvest - continue seasons and regional cap number (11,000) as presently established. Antlerless harvest should be initiated when buck harvest objectives are reached, or as provided in III, B, 3-Depredation.

Depredation - agricultural crop damage and privately owned rangeland damage will be minimized by using any method allowed by current state law. To date these methods include herding, depredation permits, mitigation permits, etc.

Predator management - recommend liberal cougar harvest if buck harvest falls significantly below the 600 buck objective and survey trends indicate a depressed deer population.

Perform established DWR range trend studies and pellet transacts.

Seek federal agency and landowner cooperation for habitat management projects.

Investigate the acquisition of the Mahaleres land in Soldier Creek.

BOUNDARY DESCRIPTION

Carbon, Duchesne, Emery, Uintah, Utah and Wasatch counties - Boundary begins at Soldier Summit and Highway US-6; then southeast on this road to I-70; east on I-70 to the Green River; north on this river to Nine Mile Creek; west on this creek to the Argyle Canyon road; west on this road to the Reservation Ridge road; west on this road to the Right Fork of White River road; southwest on this road to US-6.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Bureau of Land Management	33,100	15	438,300	76
Private	165,600	75	90,500	16
State	22,100	10	45,100	8
TOTAL	220,800		573,900	

* Surveyed 1966; F. & G. Bull. 67-1

DEER HERD UNIT 32 - RANGE CREEK (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antlerless	Total	% Succ.	Auth.	Sold
1993	1,019	282	0	282	28	0	0
1994	749	316		316	42		
1995							
1996	934	355	0	355	38		

CLASSIFICATION OF HARVEST

Percent

Bucks					Antlerless				
		Age					Age		
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1993	34	41	25	35					
1994	36	36	31	33					
1995	9	67	11	22					
1996	29	34	31	34					

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	312	529	--	34	32	13	--	6	1
93-94	--	328	575	--	44	40	23	--	10	2
94-95	--	364	500	--	47	46	33	--	4	1
95-96	--	79	414	--	25	21	38	--	22	10
96-97	--	258	357	--	40	35	33	--	15	6

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Coal Creek (6,300)	63		0	42	34
Rock Canyon (6,700)	20			5	
Cedar Ridge #1 (6,800)	2	14		3	6
Little Park (6,800)	8	5		0	12
Dugout Seeding (New)	49		0	75	66
Prickly Pear	--	23		11	2
Twin Hollow	3	3	2	2	3
Average	24			20	21

DEER HERD UNIT #33

LASAL MOUNTAINS

Status: Range conditions are good in most areas. Low fawn production persists and the postseason buck-doe ratio is below 10 bucks per 100 does for the fifth year. Hunting pressure remains high and buck harvest increased despite regional hunter cap.

Management

Objective: Manage the deer population for optimum herd size compatible with the forage resource and existing land uses with emphasis on maintain a diverse buck age structure and providing quality recreational opportunities.
Target winter herd size, a modeled winter population of 13,000 deer. Harvest; bucks - 1250, 30% three-point or better. Antlerless - as needed for population and habitat management and to control depredation on private lands. Herd composition; 15 buck:100 does, 30% of bucks three-point or better.
Maintain and protect 325,000 acres of deer winter range on the unit. Seek cooperative projects to improve the quality of critical deer habitat. Promote improved habitat security and escapement areas.

Problems & Strategies:

- Harvest - continue buck only hunting with regional hunter cap until 1997 to achieve herd size and composition objectives. If the composition objective is not met by 1997, one or more of the following strategies may be initiated; reduce the regional hunter cap, shorten season, divide region with separate hunter caps or limited entry by unit.

- Depredation - maintain contact with landowners to monitor and minimize crop depredation. Damage complaints will be addressed on a case-by-case basis in accordance with established state laws and DWR policies/guidelines.

- Predator management - seek ADC assistance in predator control when deer numbers are low and predation is slowing deer herd recovery. Liberalized cougar and bear harvests will be recommended at low deer numbers.

- Monitoring - herd population and composition will be monitored through postseason and spring classification, harvest surveys and computer modeling.

Habitat maintenance - work with public land management agencies to develop specific vegetative objectives to maintain the habitat quality of key use areas.

Habitat improvements - pursue projects for control of pinyon-juniper invasion at Brumley Ridge, Dorry Canyon and Carpenter Ridge reseedings.

Regenerate additional acres of brows by roller chopping at Two-Mile Canyon.

Identify areas where deer escapement could be enhanced through permanent or temporary road closures or other restrictions on motorized access.

Monitoring - determine trends in habitat condition through permanent range trend studies, pellet transacts, and field inspection. Land management agencies will similarly conduct range monitoring to determine vegetative trends, utilization and possible forage conflicts.

DEER HERD UNIT #33 LASAL MOUNTAINS (Continued)**BOUNDARY DESCRIPTION**

Grand and San Juan counties - Boundary begins at Interstate 70 and the Green River; then south along this river to the Colorado River; then south along this river to the Colorado River; north along this river to Kane Springs Wash; south along this drainage to Hatch Wash; south along this drainage to Highway US-191; south on US-191 to the Big Indian Road; east on this road to the Lisbon Valley Road; southeast on this road to the Island Mesa Road; east on this road to the Utah-Colorado state line; north on this line to the Dolores River; west on this river to the Colorado River; north on this river to the Utah-Colorado state line; north on this state line to I-70; west on I-70 to the Green River.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	76,500	64	84,200	19
Bureau of Land Management			264,500	59
Private	13,100	11	18,400	4
State	30,400	25	59,800	13
National Parks and Monuments			23,400	5
TOTAL	120,000		450,300	

* Surveyed 1967; F. & G. Bull. 68-2.

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1993	2,039	731	0	731	36		
1994	1,880	914		914	49		
1995							
1996	1679	612					

DEER HERD UNIT #33 LASAL MOUNTAINS (Continued)**CLASSIFICATION OF HARVEST**Percent

Bucks					Antlerless				
		Age				Age			
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1992	121	56	26	18					
1993	52	58	19	23					
1994	135	67	16	16					
1995	48	62	19	19					
1996	64	66	25	9					

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	723	1312	--	46	42	35	--	9	3
93-94	--	613	1025		43	40	37		7	2
94-95	--	625	800	--	48	46	41	--	5	1
95-96	--	494	978	--	44	41	32	--	7	1
96-97	--	928	1012	--	43	41	38	--	6	1

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Lower Castle Valley (5,200)	260	134	188	147	86
Lower Fisher Valley (5,800)	103	168	98	92	82
Lower Brown's Hole (5,800)	140	143	97	31	72
Pack Creek (5,800)	224	206	194	120	188
Upper Castle Valley (5,900)	100	100	117	27	37
Upper Fisher Valley (6,000)	108	97	137	75	60
Black Ridge (6,200)	137	131	137	71	125
Polar Under Rim (6,300)	24	94	35	9	2
Upper Brown's Hole	131	165	175	89	194
Amasa's Back (6,900)	35	31	5	69	29
Slaughter Flat (7,100)	59	80	65	66	55
Carpenter Flats (6,900)	17	25	26	22	34
Dolores Point (7,100)	122	100	103	69	88
Lower Two Mile (7,300)	42	109	28	62	50
North Beaver Mesa (7,800)	47	78	82	22	47
Average	103	111	99	65	

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

DEER HERD UNIT #34

DOLORES TRIANGLE

Status: Deer winter range is in good condition. Fawn production continued to be poor. Deer have not been coming into Utah until late November, due to mild fall weather.

Management

Objective: Manage the mule deer population for optimum herd size compatible with forage resources and existing land uses, with emphasis on maintaining a diverse buck age structure with representation of several age classes. Consider various publics in managing deer to provide a diversity of hunting and viewing experiences. A winter modeled population of 6,400. Buck harvest objective - 100 bucks - antlerless harvest, as needed. Herd composition objective - 15 bucks per 100 does observed postseason. 30% of the observed bucks be three point or better.

Maintain and protect 39,700 hectares of deer winter range which will support target herd objectives, encourage land managing agencies to improve critical deer habitats. Monitor range health with use of inter-agency range trend studies, pellet group transacts, and annual range evaluations. Assist land managing agencies in planning and funding worth while habitat projects and rehabilitating wildfires. Encourage and support land use changes that will benefit deer habitat. Work closely with DWRs habitat section to insure dollars are spent in areas that will benefit deer.

Problems &

Strategies:

- Monitoring strategies - target winter herd size will be monitored using population modeling based on harvest, production, and survival estimates. Colorado Division of Wildlife will run the model. About 40% of the herd winters in Utah so 40% of the population estimate that Colorado derives will be used to estimate Utahs population target. Harvest will be monitored through telephone surveys. Composition will be monitored with postseason and spring classification counts.

- Buck harvest strategies - buck harvest will remain under the High County Buck hunt strategy. This unit will remain closed during the regular hunt and open to the Muzzleloader hunters. If target objectives are no met by 1997 one or more of the following strategies will be initiated: 1) limit the number of muzzleloader hunters, 2) shorten the season length, 3) access management, 4) work with Colorado to adjust population objective.

- Antlerless harvest strategies - utilize antlerless harvest to stabilize deer populations when the winter target herd objective and the buck harvest objective is reached. This herd is managed by two states. Antlerless harvest has to be coordinated with Colorado to ensure proper harvest levels consistent with management plans for both states.

- Depredation management strategies - depredation on private lands will be handled on an individual basis following Division policies and guidelines.

- Predator management strategies - while deer numbers are below target objectives predator seasons and permits will be liberal in nature. Once target objectives are reached predator management will resume under current harvest goals and population objectives.

DEER HERD UNIT 34 - DOLORES TRIANGLE (continued)**BOUNDARY DESCRIPTION**

Grand County - Boundary begins at the Colorado River and the Utah-Colorado state line; then southwest along this river to the Dolores River; east along this river to the state line; north along the state line to the Colorado River.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Bureau of Land Management	NA		82,900	88
Private	NA		2,600	3
State	NA		8,600	9
TOTAL			94,100	

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1993	27	21	0	21	79	27	27
1994	27	24	0	24	89	27	27
1995	27	18	0	18			
1996	77	55	0	55	71	83	83

DEER HERD UNIT 34 - DOLORES TRIANGLE (continued)**CLASSIFICATION DATA**

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	390	427	--	47	38	23	--	24	9
93-94	--	386	645	--	43	32	24	--	34	18
94-95	--	429	452	--	38	31	25	--	24	13
95-96	--	146	919	--	46	40	23	--	16	9
96-97	--	459		--	33	26		--	26	13

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Big Triangle (5,400)	94	54	58	35	105
Little Dolores (5,600)	26	26		14	62
Fish Park #1 (Utah) (6,200)	57	26		17	48
Fish Park #2 (Colorado) (6,200)	23	31		13	45
Steamboat Mesa #2 (6,300)	--	29	145	49	49
Granite Park (6,400)	86	48	51	54	74
Ryan Park, Utah (6,400)	32	12	29	6	20
Ryan Park, Colorado (6,600)	3	0	123	0	
Steamboat Mesa #1 (6,700)	--	52	83	55	35
Average	46	31		27	

DEER HERD UNIT #35

ABAJO MOUNTAINS

Status:

Fawn production remains low and deer numbers may be declining over most of the unit. The buck-doe ratio also remains low for the fifth consecutive year. Hunting pressure decreased slightly from previous years but buck harvest increased despite regional hunter cap. Deer ranges are generally in good conditions.

Management

Objective:

Manage the deer population for optimum herd size compatible with the forage resource and existing land uses with emphasis on maintaining a diverse buck age structure and providing quality recreational experiences.

Target winter herd size; a modeled winter population of 13,500 deer. Harvest - buck - 1,400 30% three-point or better. - antlerless - as needed for population and habitat management and to control depredation on private lands. Herd composition: 15 bucks:100 does, 30% of bucks three-point or better.

Maintain and protect 100,00 acres of deer summer range and 700,000 acres of deer winter range on the unit. Seek cooperative projects to improve the quality of critical deer habitat. Maintain habitat security and escapement areas.

Problems &

Strategies:

- Harvest - continue buck only hunting with regional hunter cap until 1997 to achieve herd size and composition objectives. If the composition objective is not met by 1997, one or more of the following strategies may be initiated: Reduce the regional hunter cap, shorten seasons, divide region with separate hunter caps, or limited entry by unit.

- Depredation - maintain contact with landowners to monitor and minimize crop depredation.

- Damage complaints - will be addressed on a case-by-case basis in accordance with established state laws and DWR policies/guidelines. Encourage landowner participation in PHU program which provides economic incentives to maintain deer numbers on their properties.

- Predator management - seek ADC assistance in predator control when deer numbers are low and predation is slowing deer herd recovery.

- Monitoring - herd population and composition will be monitored through postseason and spring classification, harvest surveys and computer modeling.

- Habitat maintenance - work with public land management agencies to develop specific vegetative objectives to maintain the quality of key use areas. Continue to coordinate with land management agencies in planning and evaluating resource uses and developments that could impact habitat quality.

- Habitat improvements - pursue projects for aspen regeneration at Racetrack Reservoir, Aspen Flat and Bear Creek. Rehabilitate browse by roller chopping at Shingle Mill Draw and Brushy Basin. Pursue pinyon-juniper treatment project at Shay Mesa.

- Monitoring - determine trends in habitat condition through permanent range trend studies, pellet transacts, and field inspection. Land management agencies will similarly conduct range monitoring to determine vegetative trends, utilization and possible forage conflicts.

DEER HERD UNIT 35 - ABAJO MOUNTAINS (continued)**BOUNDARY DESCRIPTION**

San Juan County - Boundary begins at the junction of the San Juan River and South Cottonwood Creek (near Bluff); then north along this canyon drainage to Allen Canyon; north along this canyon drainage to Chippean Canyon; north along this canyon drainage to Deep Canyon; north along this canyon drainage to Mule Canyon; north along this canyon drainage to the Causeway; north from the Causeway to Trough Canyon; north along this canyon drainage to North Cottonwood Creek; north along this creek to Indian Creek; north along this creek to the Colorado River; north along this river to Kane Springs Wash; south along this drainage to Hatch Wash; south along this drainage to Highway US-191; south on US-191 to the Big Indian Road; east on this road to the Lisbon Valley road; southeast on this road to the Island Mesa road; east on this road to the Utah-Colorado state line; south on this state line to the Navajo Indian Reservation boundary; west along this boundary to the San Juan River; west along this river to South Cottonwood Creek.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	95,900	98	69,100	8
Bureau of Land Management			465,800	52
Private	2,100	2	298,400	33
State			58,900	7
TOTAL	98,000		892,200	

* Surveyed 1967; F. & G. Bull. 68-2.

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1993	1,834	771	95	866	47	150	150
1994	1,753	947	166*	1,113	54	137	137
1995	2007	866	82	948			
1996	1756	772	40	812			

* includes DWR removal

DEER HERD UNIT 35 - ABAJO MOUNTAINS (continued)**CLASSIFICATION OF HARVEST**Percent

Bucks					Antlerless				
		Age				Age			
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1992	59	71	20	9					
1993	40	65	12	23					
1994	69	52	28	20					
1995	66	50	29	21					
1996	90	53	26	21					

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	1060	1548	--	73	67	52	--	9	3
93-94	--	891	1071		56	51	50		11	4
94-95	--	1225	1086	--	55	49	46	--	11	2
95-96	--	917	1036	--	59	55	45	--	8	2
96-97	--	1160	1302	--	51	44	38	--	15	3

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Alkali Ridge (5,600) (PS)	171	132	134	75	209
Cedar Point (5,700)	126	143	171	128	175
Westwater (5,900)	15	17	10	42	42
East Hart's Draw (6400)	197	168	272	100	235
Hart Point (6500)	125	102	176	120	175
Hart's Draw (6,600) (PS)	266	237	268	141	214
Brushy Basin (7,100)	26	22	17	26	17
Peters Point (BLM) (7,300)	45	31	18	34	86
Peters Point (FS) (7,800)	78	45	40	66	49
Average	117	100	123	81	

DEER HERD UNIT #36

ELK RIDGE

Status:

Range conditions on the unit are fair to good. Beef Basin conditions have improved this year due to abundant winter and spring precipitation. But range trend for deer is still downward due to loss of browse. Deer productivity is poor. Hunter success remains high although mature buck composition may be declining.

Management

Objective:

Have modeled winter population of 7,000 deer. Buck - 350, 70% three-point or better. Antlerless, as needed for population and habitat management and to control depredation on private lands. Herd composition - 40 bucks:100 does, 50% of bucks three-point or better. Maintain and protect 100,000 acres of deer summer range and 700,000 acres of deer winter range on the unit. Seek cooperative projects to improve the quality of critical deer habitat. Maintain habitat security and escapement areas.

Problems &

Strategies:

- Harvest - continue limited entry hunting to achieve buck harvest and composition objectives. Minimize antlerless harvest to allow herd to increase unless needed to address specific habitat or depredation concerns.

- Depredation - complaints will be addressed on a case-by-case basis following established DWR policies and guidelines.

- Predator management - seek ADC assistance in predator control when deer numbers are low and predation is slowing deer herd recovery.

Monitoring - herd population and composition will be monitored through postseason and spring classification, harvest survey and computer modeling.

- Habitat maintenance - work with public land management agencies to develop specific vegetative objectives to maintain the quality of key use areas. Continue to coordinate with land management agencies in planning and evaluating resource uses and developments that could impact habitat quality.

- Habitat improvements - work cooperatively with BLM to design and implement sagebrush rehabilitation projects in Beef Basin. Complete experimental reseeding plots and prescribed burn at South and North Plains. Eliminate spring grazing from South and North Plains for duration of project study. Repair and maintain fenced enclosures at Middle Park, Stanley Park, South Plain and Beef Basin Wash. Pursue pinyon-juniper treatment projects at Dark Canyon Plateau, North Long Point, South Maverick Point, Little Baullies Mesa and Cedar Mesa. Pursue projects for aspen regeneration at Gooseberry/Deadman Point, Kigalia and Twin Springs.

- Monitoring - trends in habitat condition will be determined through permanent range trend studies pellet transacts, and field inspections. Land management agencies will similarly conduct range monitoring to determine vegetative trends, utilization and possible forage conflicts.

DEER HERD UNIT 36 - ELK RIDGE (continued)**BOUNDARY DESCRIPTION**

San Juan County - Boundary begins at the junction of the San Juan River and South Cottonwood Canyon (near Bluff); then north along this canyon drainage to Allen Canyon; north along this canyon drainage to Cheppean Canyon; north along this canyon drainage to Deep Canyon; north along this canyon drainage to Mule Canyon; north along this canyon drainage to the Causeway; north from the Causeway to Trough Canyon; north along this canyon drainage North Cottonwood Creek; north along this creek to Indian Creek; north along this creek to the Colorado River; south along this river to the San Juan River; east along this river to South Cottonwood Creek.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	123,500	99	83,600	12
Bureau of Land Management	1,000	1	513,500	70
Private	200	1	4,200	1
State			69,300	10
National Parks and Monuments			53,600	7
TOTAL	124,700		742,200	

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1993	195	162	0	162	83	198	198
1994	198	170	0	170	86	198	199
1995	279	233	0	233	84		
1996	270	208	0	208	77		

CLASSIFICATION OF HARVEST

Percent

Bucks					Antlerless				
		Age				Age			
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1993									
1994	27	5	14	81					
1995									
1996	18	0	22	72					

DEER HERD UNIT 36 - ELK RIDGE (continued)**CLASSIFICATION DATA**

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	567	1429	--	55	35	32	--	55	26
93-94		498	991		38	27	24		42	19
94-95	--	467	1158	--	47	36	31	--	32	15
95-96	--	304	773	--	37	28	25	--	33	18
96-97	--	831	777	--	36	29	25	--	25	10

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Black Mesa (5,700)	38	92	100	117	161
Lower Baullies (5,800)	25	45	63	77	74
Beef Basin (6,400) (PS)	209	285	195	129	177
Beef Basin Parks (6500)	203	152	186	135	157
Harmony Flat (6,600)	45	42	46	20	29
Texas Flat (6,600)	20	29	38	45	34
Lower Lost Park (6,700) (PS)	148	143	98	74	83
Salt Creek Mesa (7,000) (PS)	15	9	9	8	3
Milk Ranch Point (7,200)	8	14	22	26	28
Deer Flat (7,900)	148	137	277	217	172
Average	86	95	103	85	83

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #37

SAN RAFAEL

Status: There are no areas of range concern due to deer use. Deer numbers in the agricultural areas of the unit are stable or declining, due to the antlerless removal which has been done there. Depredation problems have become less numerous and less severe. Harvest was at the harvest objective in 1994.

Management Objective: Manage the agriculturally based portion of the deer herd to keep it within private landowner tolerance. Allow the remainder of the population to self regulate. Have a modeled winter population of 1,000 deer. Buck harvest objective at 100 bucks. Herd composition: this herd is not classified; therefore herd composition cannot be monitored. Maintain the quality of existing habitat.

Problems & Strategies:

- Harvest - utilize antlerless harvest in and adjacent to the agricultural areas to control depredation and to keep deer numbers within landowner tolerance. Low quality, highly disperse habitat in the remainder of the unit serves to keep deer numbers below levels where habitat damage may occur. Therefore antlerless harvest is not necessary to control this position of the herd. Maintain buck harvest strategy that corresponds to surrounding units.
- Monitoring - populations and harvest success will be monitored through harvest surveys, hunter check stations, and computer modeling.
- Depredation - individual depredation problems will be handled on a case-by-case basis according to DWR guidelines.
- Predator management - most of the deer on this unit are found in agricultural area where the objective is not to increase deer. Therefore, predator management is not needed.
- Work with the BLM to protect crucial habitats such as water sources. Habitat improvements on this unit would benefit such low numbers of deer that they would be economically unfeasible.

BOUNDARY DESCRIPTION

Carbon, Emery, Garfield and Wayne counties - Boundary begins at Price and Highway US-6; then southeasterly on US-6 to Interstate 70; east on I-70 to the Green River; south along this river to the Colorado River; south along this river and the west shore of Lake Powell to the Dirty Devil River; north along this river to Muddy Creek; northwest along this creek to Ivie Creek; west along this creek to Quitcupah Creek; northwest along this creek to Highway SR-10; north on SR-10 to Price.

RANGE AREA AND APPROXIMATE OWNERSHIP*

Ownership	Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%
Bureau of Land Management	116,900	90	1,446,300	90
Private	6,500	5	80,400	5
State	6,500	5	80,400	5
TOTAL	129,900		1,607,100	

HARVEST SUMMARY

		Harvest				Permits	
		Buck	Antler-less	Total	% Succ.	Auth.	Sold
Year	Hunters Afield						
1993	386	47	50	97	25	100	100
1994	363	151		151	42		
1995	742	151		151	42		
1996	1212	405		405	33		

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

DEER HERD UNIT #38

HENRY MOUNTAINS

Status: This deer herd is still below the management objective. Buck harvest in 1993 was 180 which is 37% of the objective of 300 bucks. Fawn production is still low.

Management Objective: Manage the deer herd for optimum herd size compatible with the range and existing land uses. Manage for a diverse age structure of bucks in the population. Have a modeled winter population of 2,000 deer. Harvest objective; 200 bucks, antlerless, as needed. Herd composition is to maintain at least 15 bucks per 100 does observed postseason, 30% of which are to be 3-point or better. Maintain and protect the existing quantity and quality of habitat.

Problems & Strategies:

- Harvest - utilize antlerless harvest to stabilize the herd when the winter herd size objective and the buck harvest objects are reached. This will not occur during the next five years due to the extremely low population at the present time. Antlerless harvest may also be used to control depredation on private lands and for habitat protection.
- Until 1997, maintain the existing buck hunt strategy of 11,000 buck hunters in the Southeastern Region, with hunters allowed to hunt any open unit in the region. If the herd composition objective has not been met by 1997 initiate one or more of the following strategies to insure that the objective is met:
 - Reduce regional hunter numbers
 - Shorten season length
 - Divide region into two areas with separate hunter caps
 - Access management
 - Limited entry by unit
- Monitoring - populations and herd composition will be monitored through post season and spring classifications, harvest surveys, hunter checking stations, and computer modeling.
- Depredation - depredation problems will be handled on a case by case basis according to established DWR policies.
- Predator management - assistance will be sought from ADC to control coyotes during times of very low deer numbers when predation can slow the recovery of the population. Liberal cougar harvest will also be recommended when deer populations are very low.
- Cooperate with the BLM through manpower and funding to complete maintenance of existing chainings. Complete at least 100 acres of maintenance projects annually in those chainings that provide summer or year-long deer habitat.

DEER HERD UNIT 38 - HENRY MOUNTAINS (continued)**BOUNDARY DESCRIPTION**

Garfield, Kane and Wayne counties - Boundary begins at Highway SR-24 and the Dirty Devil River; then south along this river to the west shore of Lake Powell; south along this shore to Halls Creek; north on this creek to Capitol Reef National Park; north along the east boundary of this park to SR-24; east on SR-24 to the Dirty Devil River.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Bureau of Land Management	11,200	78	135,900	83
Private	600	3	3,300	2
State	2,800	19	25,400	15
TOTAL	14,600		164,600	

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1993	570	181	0	181	32		
1994	443	104		104	24		
1995	263	46	0	46	17		
1996	unit	closed					

CLASSIFICATION OF HARVEST

Percent

Bucks					Antlerless				
		Age				Age			
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1993	33	27	27	45					
1994	21	67	14	19					
1995	6	50	50	0					
1996	unit	closed							

DEER HERD UNIT 38 - HENRY MOUNTAINS (continued)**CLASSIFICATION DATA**

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks > 2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
91-92	--	89	494	--	40	30	25	--	33	6
92-93	--	289	392	--	47	45	27	--	4	2
93-94	--	341	341	--	64	61	17	--	5	2
94-95	--	151			40	35	12		14	12
95-96	--		187		40	39	22		2	0

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Gold Hill (6,200)	65	8	8	0	3
Coyote Bench (6,700)	12	47	32	12	15
Side Hill (6,800)	58	75	--	3	--
Sage Flat	5	4	0	0	0
Lower Coyote Creek	23	1	0	34	0
Average	33	27	10	10	

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #39

OAK CREEK

Status: Browse on the south and east of this unit is in good to excellent condition. The range above Oak City has turned to cheat grass because of large wildfires several years ago. Herd population size is down. Hunting interest on this unit is low.

Management

Objective: Continue management emphasis of increasing buck numbers on unit with limited entry hunt.

Problems &

Strategies: Lack of adequate spring-summer range.
 - Work with the U.S. Forest Service to limit livestock access to this range until mid-summer. Continue habitat enhancement projects.

Depredation problems with deer in Oak City.
 - Monitor the population and forage use closely and apply depredation hunts in areas of need.

Low buck/doe ratio despite three years of limited entry hunting.
 - Continue limited entry type hunt but reduce number of hunters.

BOUNDARY DESCRIPTION

Juab and Millard counties - Boundary begins at Holden and Interstate 15; then northerly on I-15 to the Sevier River; northerly along this river to Highway SR-132; west on SR-132 to Highway US-6 near Lynndyl; southerly on US-6 to Highway SR-26; southeasterly on SR-26 to Holden.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	57,400	98	37,000	44
Bureau of Land Management			20,400	24
Private	500	1	24,000	28
State	600	1	3,200	4
TOTAL	58,500		84,600	

* Surveyed 1969; F. & G. Bull. 70-1

DEER HERD UNIT 39 - OAK CREEK (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992*	415	192	61	253	60	420	418
1993	274	147	0	147	54		
1994	101 **78	51	**44	51 **44	50	110	110
1995	108	62		62	57	110	110
1996	54	25		25	46		

* L.E. Rifle

** Landowner Permits

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		1082			69		63		10	2
93-94		216	286		38		33		8	
94-95		291			55				6	0
95-96		107			34	52			7	0
96-97		152			54				13	23

PELLET GROUP TREND

Transect (Elevation)		92-93	93-94	94-95	95-96	96-97
Bridge Canyon (5,400)		11	2	4	2	1
Long Canyon (5,700)		0	0	0	0	0
Cascade Canyon (5,800)			7	2	8	6
Average		5.5	3	2	3	2

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #40

WEST DESERT

Status: This unit is primarily used as winter range for migrating deer. The range is limited by moisture and soil. Winter mortality and fawn production data are not know.

Management

Objective: Manage the unit to harvest 1,000 buck deer annually.

Problems &

Strategies: Little is known about deer and what management techniques are available on this desert unit.
- In conjunction with other interested parties, design methods for assessing the status of deer on this unit.

BOUNDARY DESCRIPTION

Juab and Millard counties - Boundary begins at Black Rock; then westerly on the Black Rock-Crystal Peak road to Highway SR-21; northwesterly on SR-21 to the Utah-Nevada state line; north along this state line to the Juab-Millard county line; east along this county line to Highway SR-174; easterly on SR-174 to Highway US-6; southwesterly on US-6 to Highway SR-257; south on SR-257 to Black Rock.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
NOT SURVEYED				

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	194	73	0	73		38	
1993	691	146	0	146	21%		
1994	137 **52	46	0 **28	46	34		
1995	403	88		88			
1996	432	107	25				

** Landowner Permits

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

DEER HERD UNIT #41

FILLMORE

Status: Winter range conditions vary from fair to good. Winter mortality in 92-93 was high. With the low fawn production of 41 fawns per 100 does post season, it will take this unit's deer population several years to recover. The current mild winter should keep winter loss low. Harvest remains well below objectives.

Management

Objective: To achieve and maintain a yearly buck harvest of 1,900 deer.

Problems &

Strategies: Deer depredation on agricultural land.
 - Follow short term solution outlined by depredation policy, develop habitat plan to treat adjacent P-J areas for a long term solution.

Build up of deer on winter range in Meadow Creek, Holden and residential areas.
 - Monitor the population and forage use closely and apply depredation hunts in areas of need.

Summer range on unit needs improvement.
 - Continue to encourage U.S. Forest Service to consider range restoration and enhancement projects.

A lot of complaints of deer in the town of Fillmore.
 - Utilize depredation hunts to remove problem deer.

Division lands on unit have experienced very heavy use of vegetation.
 - Fall of 1993 range revegetation projects were started on Division lands.

BOUNDARY DESCRIPTION

Juab, Sanpete, Millard and Sevier counties - Beginning at Holden and Interstate 15; then north on I-15 to the Sevier River; southeasterly along this river to the Sevier Bridge Reservoir; easterly along the north shoreline of this reservoir to the Juab-Sanpete county line; easterly along this county line to Highway SR-28; southerly on SR-28 to Highway US-89; southerly on US-89 to Interstate 70 and Clear Creek; westerly on I-70 to I-15; north on I-15 to the Cove Fort-Black Rock road; westerly on this road to Highway SR-257; northerly on SR-257 to Delta and Highway US-50; southeasterly on US-50 to Holden.

RANGE AREA AND APPROXIMATE OWNERSHIP*

Ownership	Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%
Forest Service	317,500	100	97,800	25
Bureau of Land Management			194,500	50
Private			75,500	19
State			9,200	2
Wildlife Resources			14,900	4
TOTAL	317,500		391,900	

* Surveyed 1969; F. & G. Bull. 70-1.

DEER HERD UNIT 41 - FILLMORE (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler- less	Total	% Succ.	Auth.	Sold
1992	5,359	1,536	0	1,536	29		
1993	3440	630	0	630	18%		
1994	1298 **62	494	0 **29	494	38		
1995	2870	773		773			
1996	3783	1398		1398	37		

** Landowner Permits

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		2,236			63		60		5	1
93-94		1026	1094		34	33	30		3	1
94-95		900			62	60			4	1
95-96	614	812			41	39	36		6	1
96-97		2080	1527		57	50	34		9	36%

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
North Chalk Creek (5,400)	32	26	24	75	12
Wide Canyon (5,500)	69	44	41	81	87
Maple-Wildgoose (Lower) (5,600)	338	77	64	115	88
Maple-Wildgoose (Upper) (5,600)	181	61	54	69	131
Maple Hollow (6,000)	83	11	9	16	34
Pioneer Canyon (6,200)	29	22	18	10	13
Upper Smith (6,200)	48	38	30	49	52
Upper Wide Canyon	65	19	20	28	34
South Chalk (5,400)	50	29	23	27	58
Meadow Creek (5,600)	53	27	25	66	114
Dameron #1 (5,700)	53	21	18	39	101
Dog Valley (6,300)	52	43	32	35	34

Average	88	35	30	51	63
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*** * * MANAGEMENT PLAN SYNOPSIS * * ***

DEER HERD UNIT #42

SALINA

Status: Long term drought has been a serious problem, which has resulted in low fawn production and recruitment of bucks into the herd. Heavy snow accumulation in the winter of 1993, a very dry winter and summer of 1994, and a very wet and cold spring of 1995 has resulted in further reduction to the herd. Sportsmen will find low deer numbers for the next several years.

Habitat decline is a critical problem. Opportunities to reverse this trend seem to be diminishing. Winter browse throughout the unit is old and decadent, and disappearing. On the west side of the unit lack of browse is the main concern; on the east side of the unit lack of spring green up is a major problem, and throughout the unit an encroaching pinyon pine and juniper forest. An additional concern is the encroachment of spruce-fir into the aspen areas. If the habitat cannot be maintained, or improved, the herd objectives will become unrealistic.

Management Objective:

Keep the herd numbers in balance with available habitat, and continue sport harvest of bucks. Maintain or improve fall, winter and spring range. Increase the present herd size to 9,000 deer post season. The composition objective is 15 buck:100 does, observed post season with 30% of the bucks being 3 pt. Or larger.

Problems & Strategies:

Habitat decline is a critical problem. Agricultural depredation in the Gooseberry Valley and the Fremont agricultural areas are major problems.

- Cooperative interagency projects to carry out range rehabilitation projects especially on areas adjacent to agricultural areas to increase spring green-up and available forage.
- Continue to hold maintenance depredation hunts to encourage deer to move back on the mountain out of the agricultural areas.

BOUNDARY DESCRIPTION

Emery, Sevier and Wayne counties - Boundary begins at the junction of Highway US-89 and the Sanpete-Sevier county line; then easterly along this county line to the Muddy Creek-Salina Creek drainage divide; easterly along this drainage divide to the Muddy Creek- Quitchupah Creek drainage divide; easterly along this drainage divide to Emery and Highway SR-10; northerly on SR-10 to Muddy Creek; southeasterly along Muddy Creek to Last Chance Creek; northwesterly along Last Chance Creek to Highway SR-72; southerly on SR-72 to Loa and Highway SR-24; northerly on SR-24 to US-89; northerly on US-89 to the Sanpete-Sevier county line.

RANGE AREA AND APPROXIMATE OWNERSHIP*

Ownership	Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%
Forest Service	304,900	84	157,863	49
Bureau of Land Management	11,000	3	111,190	35
Private	42,000	12	40,326	12
State	3,700	1	8,400	3
Wildlife Resources			830	1

TOTAL	361,600		318,609	
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DEER HERD UNIT 42 - SALINA (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	7,483	1,766	80	1,846	25	150	150
1993	3890	610	0	610	16		
1994	1347	569	0	569	42		
1995	2464	727	0	727	30		
1996	2541	925		925	36		

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		799	398		70	66	40		8	4
93-94	--	698	618	--	48	45	33	--	7	3
94-95		1099	724	--	59	55	58	--	8	5
95-96	--	478	825	--	48	45	45	--	7	2
96-97		3029	3194	--	81	71	57	--	14	46%

PELLET GROUP TREND

	92-93	93-94	94-95	95-96	96-97
Transect (Elevation)					
Durphy Pasture (6,100)				15	34
Black Mountain (6,200)				14	13
Triangle Mountain (6,200)				12	4
Fallon Springs (6,600)				8	6
Rocks (7,000)					9
Rose Meadow (7,500)				6	6
Cedarless Flats	9	2	4	1	12
Dog Flat	30	35	11	39	25
Seven Mile Exclosure (new 1990)	16	30	32	14	33
Duncans (8,200)					4
Elk Camp (8,200)	45	24	40	27	48
Old Woman*					3
Average					15

* Established 1975.

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #43

THOUSAND LAKE

Status: Long-term drought was a serious problem which resulted in low fawn production and recruitment of bucks into the herd. Heavy snow accumulation in the winter of 1993, a very dry winter and summer of 1994, and a very wet and cold spring of 1995 has resulted in further reduction to the herd. Sportsmen will find low deer numbers for the next several years.

Habitat decline is the critical problem. Opportunities to reverse this trend seem to be diminishing. Winter browse throughout the unit is old, decadent, and disappearing. On the west side of the unit, lack of browse and spring green up is a major problem; and throughout the unit, the major concern is an encroaching pinyon pine and juniper forest. An additional concern is the encroachment of spruce-fir into the aspen areas. If the habitat cannot be maintained, or improved, the herd objectives will become unrealistic.

Management

Objective: Keep the herd numbers in balance with available habitat and continue sport harvest of bucks. Maintain or improve fall, winter and spring range. Increase the present herd size to 3,000 deer post season. The herd composition objective is 15 bucks:100 does, observed post season with 30% of the bucks being 3 pt. Or larger. Maintain a limited entry quality hunt unit.

Problems &

Strategies: Habitat decline is a critical problem. Agriculture depredation near Baker Ranch, Fremont, Lyman and Torrey are a major problem.

- Cooperative interagency projects to carry out range enhancement projects, especially on areas adjacent to depredation problems to increase spring green-up and available forage.
- Continue to hold maintenance depredation hunts to encourage deer to move back on the mountain out of the agricultural areas.

BOUNDARY DESCRIPTION

Emery, Sevier and Wayne counties - Boundary begins at Hanksville and the junction of Highway SR-24 and Muddy Creek; then westerly along this creek to Last Chance Creek; westerly along this creek and North Last Chance Creek to Highway SR-72; southerly on SR-72 to SR-24 near Loa; southeasterly on SR-24 to Hanksville.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	69,100	90	59,900	66
Bureau of Land Management	3,800	5	6,600	7
Private			19,000	21
State	3,800	5	3,500	4
National Parks and Monuments			1,400	2
TOTAL	76,700		90,400	

* Surveyed 1963; F. G. G. Bull. 64-2.

DEER HERD UNIT 43 - THOUSAND LAKE (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	188	12	125	137	73	222	222
1993	54	17	0	17	31		
1994	54 **35	29	0 **18	29	63	54	54
1995	77	32	0	32			
1996	77	46		46	60		

** Landowner Permits

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		385	264		66	56	36		19	11
93-94		299	310		42	36	35		18	9
94-95	--	419	521	--	67	56	54	--	20	7
95-96	--	230	311	--	51	43	41	--	19	10
96-97		797	701		77	70	66		10	60%

PELLET GROUP TREND

Transect (Elevation)		92-93	93-94	94-95	95-96	96-97
Polk Creek (7,600)		39	26	27	24	36
Meek's Lake (7,600)		36	24	45	30	34
Thousand Lake (9,800)		1	0	1	0	2
Sage Flat		4	11	4	2	10
Average		20	15	19	14	21

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #44

BOULDER

Status: Long term drought has been a serious problem which has resulted in low fawn production and recruitment of bucks into the herd. Heavy snow accumulations in the winter of 1993, a very dry winter and summer of 1994, and a very wet and cold spring of 1995 has resulted in further reduction to the herd. Sportsmen will find low deer numbers for the next several years.

Habitat decline is the critical problem. Opportunities to reverse this trend seem to be diminishing. Spring green-up is limited on spring range. Winter browse is becoming old, decadent, and disappearing. Throughout the unit the major concern is an encroaching pinyon pine and juniper forest. An additional concern is the encroachment of spruce-fir into the aspen areas. If the habitat cannot be maintained, or improved, the herd objectives will become unrealistic.

Management

Objective: Keep the herd numbers in balance with available habitat and continue sport harvest of bucks. Maintain or improve fall, winter and spring range. Support a high country preseason quality buck hunt on the Aquarius Plateau. There is a high hunter satisfaction and support for this hunt. Increase the present herd size to 6,000 deer post season. The herd composition objective is 15 bucks:100 does, observed post season with 30% of the bucks being 3 pt. Or larger.

Problems &

Strategies: Habitat decline is a critical problem. Agricultural depredation near Angle, Antimony, Teasdale, Grover, Pine Creek, the town of Boulder and Salt Gulch is a problem.

- Cooperative interagency projects to carry out range enhancement projects on areas adjacent to these impacted areas to increase spring green-up and available forage.
- Continue to hold maintenance depredation hunts to encourage deer to move back on the mountain out of the agricultural areas.

BOUNDARY DESCRIPTION

Garfield, Piute, Wayne and Sevier counties - Boundary begins at Antimony and Highway SR-22; then southerly on SR-22 to Highway SR-12; easterly on SR-12 to Escalante and the Escalante River; easterly along the Escalante River to Harris Wash; northeasterly along Harris Wash drainage and the Harris Wash road to the Burr Trail road; easterly on this road to the east boundary of Capitol Reef National Park; northerly along this boundary to Highway SR-24; westerly on SR-24 to Highway SR-62; southerly on SR-62 to SR-22; southerly on SR-22 to Antimony.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%
Forest Service				
Bureau of Land Management				
Private				
State				
National Parks and Monuments				
TOTAL				

DEER HERD UNIT #44 -BOULDER (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	3,236	823	199	1,022	31	280	280
1993	2,616	704	0	704	27		
1994	965 **323	438	0 **239	438	45	0	0
1995	1759	628*	0	628*			
1996	1558	769	0	769	49		

**Landowner Permits

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		429	412		70	63	42		11	7
93-94		679			48		43		13	8
94-95	--	494	782	--	63	57	55	--	10	6
95-96	--	514	816	--	58	57	50	--	13	10
96-97		850	1132		81	71	72		14	27%

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Jorgensen Flat (7,200)	13	14	16	10	15
Happy Valley (8,000)	9	6	2	3	10
Pine Creek (8,000)	5	10	8	4	6
Wide Hollow (8,000)	13	15	14	21	12
Wildcat Seeding (8,000)	5	18	20	11	16
Fish Creek Cove	10	1	0	0	9
Lower Pine Creek (discontinue-92)					
Miners Mountain	6	0	0	0	3
Torrey Town	0	0	0	0	1
New Home Bench (6,900)	8	7	10	8	14
Allen's Canyon (7,600)	16	15	12	14	17
Nazer Draw (7,900)	51	68	50	33	47
White's Flat (8,000)	19	22	21	28	18
North Creek (8,400)	51	6	4	5	11
Stump Spring (8,400)	18	17	14	19	15
Mud Lake	78	46	19	39	66
Average	20	16	11	13	17

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #45

MONROE

Status: Fawn production was low, however, because of the mild winter, winter losses were minimal. On spring range rides the deer were observed in excellent health and body condition and the herd is expected to bounce back. Spring ranges were productive with an early green up.

Management Objective: Management objective is harvest of 1,500 buck deer.

Problems & Strategies:

Protect and improve the critical winter range.

- Work with other land management agencies to investigate the closure of some of the nonessential roads.

Develop Elbow Ranch for wintering herds.

BOUNDARY DESCRIPTION

Piute and Sevier counties - Boundary begins at Vermillion; then southerly on Highway SR-24 to its junction with Highway SR-62; southerly and westerly on SR-62 to Highway US-89; northerly on US-89 to Vermillion.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	164,200	95	42,700	29
Bureau of Land Management			82,800	57
Private			6,000	4
State	8,600	5	13,800	9
Wildlife Resources			300	1
Indian			400	1
TOTAL			146,000	

* Surveyed 1963; F. & G. Bull. 64-2.

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	2,480	871	0	871	35		
1993	2,065	409	44	453	22		
1994	873 **106	487	61 **52	548	56	150	150
1995	2001	716	32	748			
1996	2622	1141					

** Landowner Permits

DEER HERD UNIT 45 - MONROE (continued)**CLASSIFICATION OF HARVEST**Percent

Bucks					Antlerless				
		Age				Age			
Year	Sample Size	1.5	2.5	Prime	Sample Size	F	1.5	2.5	PRIME
1992									
1993									
1994									
1995									

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		666	398		60		10		10	1.5
93-94		1431	426		36		34		9	
94-95	--	1716	615	--	54		48	--	10	3
95-96		1464	904		61		48		9	3
96-97		2045	4863		76	67	51		14	51%

PELLET GROUP TREND

Transect (Elevation)	93-94	94-95	95-96	96-97
Maple Creek (6,200)	14	12	13	28
Thompson Basin (6,300)	15	19	14	37
Bell Rock (7,200)	9	3	10	8
Smith Canyon (7,400)	3	7	7	5
Live Oak (7,500)	14	10	15	21
Koosharem Canyon (7,600)	6	6	8	14
Average	10	10	11	19

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #46

MT. DUTTON

Status: Fawn production has been low since 1989. Population is significantly lower than prior to 1989, but now seems to be stabilizing somewhat.

Management

Objective: The harvest goal of the Mt. Dutton Deer Management Plan is 500 bucks annually. As new population composition goals are developed, the new management plan will need to be revised. Limited antlerless harvest may need to continue in valley cultivated agricultural areas to control depredation.

Problems &

Strategies:

Pinyon and juniper trees are increasing on critical winter range.

- BLM will continue to implement Antimony Habitat Management Plan in 1994.

Water may be limiting factor in several areas.

- USFS will repair Table Mountain guzzler and will construct Road Hollow guzzler in 1994.

Increase of conifer domination in aspen continues as problem on summer range.

- USFS will continue to develop strategies, such as controlled burns, to open new forage areas for deer.

BOUNDARY DESCRIPTION

Garfield and Piute counties - Boundary begins at the junction of Highways U.S. 89 and SR-62 near Kingston; then easterly along SR-62 to Highway SR-22; southerly on SR-22 and the Antimony-Bryce Canyon road to Highway SR-12; westerly along SR-12 to Highway U.S. 89; northerly along U.S. 89 to SR-62.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	143,400	100	69,800	48
Bureau of Land Management			67,300	46
Private			2,000	1
State			6,800	5
TOTAL	143,400		145,900	100

* Surveyed 1964; F. & G. Bull. 65-1.

DEER HERD UNIT 46 - MT. DUTTON (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	629	194	0	194	31		
1993	637	208	0	208	33		
1994	455	213	1*	214	47	5*	
1995	566	202	0	202			
1996	673	300		300	45		

* Landowner permits

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		770	671	--	56	53	29	--	5	2
93-94		511	241	--	54	50	42	--	8	3
94-95		771	784	--	49	44	40	--	11	4
95-96		605	870	--	49	43	39	--	13	4
96-97		674	1302		58	54	37		7	48%

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Jones Corral Road (7,100)	32	44	89	81	95
Sand Wash (7,100)	6	3	0	3	3
Burnt Hollow (7,900)	23	28	15	14	54
Cabin Hollow (7,900)	49	62	35	38	28
Average	46	34	35	34	45

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #47

PANGUITCH LAKE

Status: The winter of '92 - '93 was hard on this deer herd unit. Post season classification resulted in 63 fawns per 100 does. Spring classification showed only 19 fawns per 100 does. Preliminary data shows a hunter success of 21.3. Harvest goals were not met on this unit.

Management

Objective: Maintain a harvest of 1,500 buck deer annually.

Problems &

Strategies: Deer depredation on agricultural areas continues on the entire unit.
- Deal with agricultural damage by herding and if necessary, by issuance of depredation permits.

Subdivision development reducing key deer winter range on Parowan front.

- Continue to control pinyon-juniper on both BLM and Division lands.

Private lands along the Parowan front and in the Hatch area are lacking access to public; resulting in low harvest of depredation deer.

- Continue to seek landowner cooperation to obtain hunter access.

BOUNDARY DESCRIPTION

Garfield, Iron and Kane counties - Boundary begins at Cedar City and Highway SR-56; then westerly on SR-56 to the Lund-Cedar City road; northerly on this road to the Parowan Gap road; easterly on this road to Interstate 15; northerly on I-15 to Highway SR-20; easterly on SR-20 to Highway US-89; southerly on US-89 to Highway SR-14; westerly on SR-14 to Cedar City.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	247,000	86	51,700	18
Bureau of Land Management	6,400	2	156,300	56
Private	22,400	8	49,700	18
State	3,900	1	16,000	6
Wildlife Resources			4,800	2
National Parks and Monuments	6,400	2	1,200	1
TOTAL	286,100		279,700	

* Surveyed 1961; F. & G. Bull. 62-5.

DEER HERD UNIT 47 - PANGUITCH LAKE (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	2,597	604	25	629	24	50	50
1993	2411	523	0	523	22		
1994	1498	602		602	40		
1995	2501	907	64	971			
1996	3726	1533					

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	1029	1027	--	65	60	17	--	8	6
93-94		651			63				7	
94-95		852	632	--	61	58	50	--	13	5
95-96		1136	1340		58	54	38		6	3
96-97		1740	1552		67	63	35		7	34%

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Fiddler Canyon (6,000)	38	46	46	25	43
Lawrence (6,100)	57	6	98	25	82
Ellecker Basin (6,200)	188	105	102	71	106
Cottonwood, Forest (6,200)	124	127	131	74	122
John Calton (6,500)	45	100	86	45	48
Three Creeks (7,000)	18	8	6	17	17
Three Mile Browse (7,100)	22	11	11	0	22
Little Creek (7,400)	112	91	47	40	80
Buckskin (7,600)	89	112	78	58	86
Middle Canyon (8,000)	66	49	43	47	58
Pole Hollow Browse (8,600)	41	35	28	32	40
Average	73	64.00	61.00	40.00	64.00

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #48

BEAVER

Status: Fawn production continues to be low. The mild open winter allowed the deer to widely disperse throughout the winter range with many wintering on the upper limits. The only real concentrations occurred in the spring on agricultural areas near Beaver. This was a result of the dry spring ranges and the deer being attached to the irrigated alfalfa for succulent forage. No winter losses were observed on the spring range rides and very little predator loss. The deer were strong and healthy and fawn production is expected.

Management

Objective: Achieve an annual harvest of 2,300 buck deer.

Problems &

Strategies: Spring agricultural crop depredation in the North Creek, South Creek, Sulfurdale, Marysvale, and Circleville areas. Fall agricultural crop damage in Wildcat and Sulfurdale.

BOUNDARY DESCRIPTION

Beaver, Iron, Millard, Piute and Sevier counties - Boundary begins at Highway US-89 and Interstate 70 at Clear Creek Canyon; then westerly on I-70 to Interstate 15; north on I-15 to the Cove Fort-Black Rock road; westerly on this road to Highway SR-257; south on SR-257 to Milford and the Union Pacific railroad tracks; southerly along these tracks to Lund; easterly from Lund on the Lund-Cedar City road to the Parowan Gap road; easterly on this road to I-15; northerly on I-15 to Highway SR-20; easterly on SR-20 to US-89; northerly on US-89 to I-70.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	220,600	95	60,800	10
Bureau of Land Management	12,400	5	427,900	70
Private			45,800	7
State			78,700	13
National Parks and Monuments			700	0
TOTAL	233,000		613,900	

HARVEST SUMMARY

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992*	3,279	798	0	798	24		
1993	3,192	764	0	764	24		
1994	2,139 **35	772	0 **22	772	36		
1995	3347	977	0	977			
1996	3727	1262			34		

** Landowner Permits

* Combined data (units 49 and 56).

DEER HERD UNIT 48 - BEAVER (continued)**CLASSIFICATION DATA**

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		831	365		65		15		13	2
93-94		240	390		36		35		9	
94-95	--	1945	588	--	50		48	--	11	5
95-96		1329	1043		53		51		10	4
96-97		2055	3645		64	55	42		16	41%

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Sargent Mtn.		20	10	16	24
B-Hill (6,500)		16	17	14	21
Beaver Table (6,600)		21	20	14	18
Baker's Canyon (6,800)		10	9		1
Rocky Reseeding (7,300)		15	6	12	10
South Creek		20	22	18	27
Belly Ache (6,600)		16	12	16	12
Revenue Gulch (7,000)		20	6	8	3
10-Mile Reseeding (7,500)		12	4	13	13
Oak Basin (8,000)		24	5	8	6
Average		17	11	13	14

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #49

SOUTH WEST DESERT

Status: Range condition overall is good. Winter mortality generally does not occur on this unit. Fawn production is poor. Overall deer numbers are extremely low, and show no sign of increasing.

Management

Objective: Maintain an annual harvest of 900 buck deer.

Problems &

Strategies: Lack of good summer range.
 - Continue to use current management practices on Division-owned land.

Reinvasion of pinyon on chained areas.
 - Continue to sell or issue free use Christmas tree permits to manage the invasion of trees.

BOUNDARY DESCRIPTION

Beaver, Iron and Millard counties - Boundary begins at Black Rock; then westerly on the Black Rock-Crystal Peak road to Highway SR-21; northwesterly on SR-21 to the Utah-Nevada state line; south along this state line to the Union Pacific Railroad tracks; northeasterly along these tracks to Milford and Highway SR-257; northerly on SR-257 to Black Rock.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	TOTAL RANGE			
Ownership	Area (acres)	%		
Bureau of Land Management	688,300	85		
Private	25,300	3		
State	84,000	11		
Wildlife Resources	10,200	1		
TOTAL	807,800			

* Surveyed 1969; F. & G. Bull. 70-1.

DEER HERD UNIT 49 - SOUTH WEST DESERT (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	702	157	0	157	22		
1993	490	107	0	107	22		
1994	288	111	0	111	38		
1995	245	55	0	55			
1996	216	75	0	75	35		

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		188			33	27			20	11
93-94										
94-95										
95-96					NO	DATA				

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #50A

EAST PINE VALLEY

Status:

It is felt by DWR personnel that deer numbers and buck quality continue to decline on both limited entry units. Hunter questionnaires indicated a high level of dissatisfaction with both deer numbers and buck numbers on the Browse unit. Hunters on the Comanche unit reported seeing good numbers of does and fawns but very few bucks of any age. No discernible range problems are shown to exist. Agricultural and ornamental damage in the New Harmony area persists, though the primitive weapons antlerless hunt seems to alleviate problems somewhat.

Neither hunt is a trophy unit at this time, but instead offers a low-density hunting experience.

Management

Objective:

Maintain limited entry hunting on the Comanche and Browse units. Continue the high country buck hunt on the Pine Valley Wilderness area. The Bumblebee unit is general season buck only hunting. Maintain hunter success on limited entry hunts to above 50%.

Problems &

Strategies:

Deer depredation on agricultural land in and around New Harmony.

Deer mortality on I-15 between Anderson junction and Black Ridge has been reduced significantly as a result of deer barrier fencing. Deer highway mortality north of Ash Creek reservoir continues.

- Continue to work with the Department of Transportation to fence portions of I-15, south of Cedar City.
- Work to increase water (guzzlers) in Yant Flat-Cottonwood area.

BOUNDARY DESCRIPTION

Iron and Washington counties - Boundary begins at St. George and Interstate 15; then north on I-15 to Cedar City and Highway SR-56; westerly on SR-56 to the Pinto Road; westerly on this road to Pinto; southerly on the Pinto-Whiterocks road to the Summit Trail; southerly on this trail to the Cottonwood Creek drainage and the Cottonwood road; southerly on this road to St. George.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
Forest Service	40,200	98	64,600	57
Bureau of Land Management	800	2	22,800	20
Private	100	1	21,100	18
State	200	1	3,200	5
TOTAL	41,300		111,700	

* Surveyed 1968; F. & G. Bull. 69-2

DEER HERD UNIT 50A - EAST PINE VALLEY (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	44	35	0	35	80	44	44
1993	208	66	60	126	61	100	100
1994	373 **5	173	50 **4	223	47	187	187
1995	712	189	117	306			
1996	349	137					

** Landowner Permits

* Limited entry rifle season permits only. NOTE: Bumblebee unit was general season in 1992

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		497	226	67		64	35		4	2
93-94		400			59				11	
94-95	--									
95-96		185	430		56		55		19	5
96-97										

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Anderson Reservoir (4,300)	71	46	38	37	35
Yant Flat (State) (4,600)	3	0	0	4	2
Cottonwood (4,800)	0	0	0	3	0
Millcreek (5,000)	63	26	37	22	14
Quitcupah (6,200)	28	43	58	32	52
Woolsey Ranch (6,400)	34	37	38	72	37
Broad Hollow (6,600)	92	135	121	100	132
Average	42	41	42	39	39

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #50B

WEST PINE VALLEY

Status:

The harvest on 50B remained stable in 1995 despite lower hunter numbers. Overall, deer numbers may be increased due to a better fawn crop in 1995. The buck - doe ratio is still extremely poor. The winter of 1995-96 was extremely mild and overwinter survival was excellent. However, 1996 has turned into a year of near record drought conditions. The outlook is for poor fawn production and very poor range conditions in 1996-97.

Agricultural depredation diminished slightly in 1995, perhaps due to control efforts but also to excellent spring and early summer moisture. The summer of 1996 will look nothing like that, with severe drought conditions prevalent.

Problems & Strategies:

Summer range (on the western portions) of this unit limits carrying capacity. Pinyon-juniper encroachment on some of the winter ranges continues to be a concern.

- Continue to work with other land management agencies in carrying out the existing range improvement projects.
- Recreational home development in the Pine Valley Central and Veyo areas is greatly curtailing our ability to harvest deer.
- Work with the landowner and home owners to come up with a plan that will address the need to control the deer herds in these areas without jeopardizing the safety of the home owners.

Agricultural depredation is high in some areas on this unit, despite low deer numbers.

- Continue with pre-season and post-season antlerless removal in problem areas to control deer numbers.

BOUNDARY DESCRIPTION

Iron and Washington counties - Boundary begins at the Utah-Arizona state line and Interstate 15; then northerly on I-15 to St. George and the Cottonwood road; northerly on this road to the Cottonwood Creek drainage; northerly along this drainage to the Summit Trail; northerly along this trail to the Pinto-Whiterocks road; northwesterly on this road to Pinto; northeasterly on the Pinto road to Highway SR-56; easterly on SR-56 to the Lund-Cedar City road; northwesterly on this road to Lund and the Union Pacific Railroad tracks; westerly along these tracts to the Utah-Nevada state line; south along this state line to the Utah-Arizona state line; east on this state line to I-15.

RANGE AREA AND APPROXIMATE OWNERSHIP*

Ownership	Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%
Forest Service	147,200	68	191,500	38
Bureau of Land Management	61,500	28	243,900	49
Private	6,400	3	34,500	7
State	1,900	1	28,100	6
Wildlife Resources			2,600	<1
TOTAL	217,000		500,600	

DEER HERD UNIT 50B - PINE VALLEY (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	3,521	980	43	1,023	29	50	50
1993	3,785	1,046	145	1,191	31	225	225
1994	2,528 **50	883	121 **37	1,004	35	163	163
1995	3095	914	39	953			
1996	2934	1025					

** Landowner Permits

* Dixie-West Pine Valley and Terry Ox Valley (units 61B and 61C) data combined.

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		1028	976		31	48	35		5	1
93-94		996	1239		47	44	34	--	5	
94-95	--	1773	1440	--	40	38	35	--	6	3
95-96		1214	992		62		49		4	2
96-97		1328	768		54	50	46		7	34%

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Wide Canyon (6,000)	25	22	24	12	12
Truman Bench PS (6,300)	100	125	112	58	
Cove Mountain PS (6,500)	68	49	52	35	40
Iron Peg PS (6,700)	25	45	38	57	31
Paradise Reservoir PS (7,700)	108	121	115	80	91
Poachers Pass PS (4,000)	58	51	46	62	98
Jackson PS (4,000)	4	2	1	5	25
Manera Wash PS (4,800)	53	17	17	23	35
Tobin Bench PS (4,800)		49	62	54	111
Racer Canyon PS (5,800)	30	20	20		
Colie Flat PS (6,700)	34	19	19	discontinued	
Lost Spring PS (6,800)	147	110	110		
Ox Valley	124	64	64		
Newcastle Dump		49	49	64	281

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #51

ZION

Status: This unit is approximately 60% private on summer range and 23% private on winter range. Hunter access is somewhat limited on this unit; thus hunting pressure is somewhat decreased and hunter success is generally better than surrounding units. Hunter success was up 31.1% in 1993. Winter loss was no significant as it was on units further to the north.

Management Objective: Maintain an annual harvest of 1,300 buck deer.

Problems & Strategies: Depredation along the Virgin River, and other low lands agricultural areas is a continuing problem.
 - Use depredation hunts and some herding to alleviate the problem. Due to population growth, using depredation hunts in the Rockville and Springdale area is almost impossible to implement. In some acute problems deer will be removed by DWR personnel.

Summer home development on the summer range continues and will prove to be more of a problem to the management of this deer herd.

- Work closely with the Federal land managements to implement road management plans on their respective areas of responsibility.

On some of the winter range areas, old chaining are reverting back to Pinyon-Juniper invasion.

- Work with Federal Agencies to address this invasion. The preferred method of treatment would be cutting the invading trees by prison crews or by contracts with private individuals.

BOUNDARY DESCRIPTION

Iron, Kane and Washington counties - Boundary begins at Cedar City and Highway SR-14; then easterly on SR-14 to Highway US-89; southerly on US-89 to Kanab and alternate Highway US-89; south on alternate US-89 to the Utah-Arizona state line; west on this state line to Interstate 15; north on I-15 to Cedar City.

RANGE AREA AND APPROXIMATE OWNERSHIP*

Ownership	Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%
Forest Service	55,800	19	1,400	<1
Bureau of Land Management	16,600	6	289,500	50
Private	173,300	60	132,500	23
State	9,400	3	45,600	8
National Parks and Monuments	32,800	11	108,400	19
TOTAL	287,900		577,400	

DEER HERD UNIT 51 - ZION (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	2,746	1,040	0	1,040	38		
1993	2,944	905	0	905	31		
1994	2,123 **3	1,105	0 **15	1105 **15	52	*35	
1995	2690	1113	97	1210			
1996	2043	826					

* Combined units 58 and 59.

** Landowner Mitigation Permits

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93	--	948	--	--	76	70	--	--	8	2
93-94	--	691	435	--	74	69	55	--	7	3
94-95	369	1,304	582	87	61	61	56	11	7	3
95-96	84	1,317	1,079	87	68	53	37		10	4
96-97		1752	1107		62	58	35		7	30%

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Anderson Junction (4,000)	78	158	92	150	48
Browse-Sylvester (4,100)	86	203	205	146	181
East Mesa (5,400)	120	114	89	154	137
Emerald (5,400)	32	43	43	34	42
Cotton (5,440)	138	51	46	35	72
Bonneville (6,300)	166	170	147	114	381
Elephant Gap (5,600)	29	51	38	49	77
Barricks Point (5,700)	31	35	68	26	26
Butler Ranch (6,100)	68	111	94	125	154
North Fork (6,800)	14	18	12	26	40
Harris Mountain	34	65	25	42	26
Average	72	93	78	82	108

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #52

PAUNSAUGUNT

Status: Deer population is stable or increasing slightly. Encroachment of Pinyon and Juniper is a concern on some areas on winter range.

Management Objective: Limited entry hunting. Maintain overall hunter success above approximately 60%. Continue with landowner permits and Alton Posted Big Game Hunting Unit.

Problems & Strategies:

Migrating deer are subject to harvest both in Utah and Arizona.

- Continue work with Arizona managers to evaluate harvest and impact on large buck deer.

Set up joint Utah/Arizona project to evaluate migration of Paunsaugunt and Kaibab deer populations on Buckskin Mountain Area.

- Depredation problems on agricultural lands in several areas. Continue with antlerless harvest as needed.

A healthy deer population and hunting on private lands is necessary to insure the future to this herd.

- Continue to work with organized landowners association and Alton Posted Big Game Hunting Unit.

Browse has deteriorated on much of winter range in the last 20-30 years by increasing domination of range by pinyon juniper trees.

- Continue to work with BLM and private land managers on appropriate projects to enhance deer forage.

Water distribution is a problem on some winter range.

- Continue to work with BLM to develop water for deer.

Small boundary change needed on Bryce Valley area. Recommended change to be made in 1995 to correspond with bylaws and allocation of permits to Paunsaugunt Landowners Association.

BOUNDARY DESCRIPTION

Garfield and Kane counties - Boundary begins at the junction of Highways US-89 and SR-12; then easterly on SR-12 to the Paria River; southerly along this river Utah-Arizona state line; west along this state line to Highway Alternate US-89 south of Kanab; north on Alt. US-89 to Kanab and US-89; northerly on US-89 to SR-12.

RANGE AREA AND APPROXIMATE OWNERSHIP*

Ownership	Summer Range		Winter Range	
	Area (acres)	%	Area (acres)	%
Forest Service	185,500	70		
Bureau of Land Management	26,500	10	373,000	85
Private	26,500	10	26,200	6
State			40,400	9
National Parks and Monuments	26,500	10		
TOTAL	265,000	100	439,600	100

DEER HERD UNIT 52 - PAUNSAUGUNT (continued)**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler-less	Total	% Succ.	Auth.	Sold
1992	465	286	67	353	76	491	491
1993	576	311	126	437	76	170	170
1994	576 *47	325	96 *42	421 *42	80	130	130
1995	444	257	39	296			
1996	315	252					

* Landowner permits

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
92-93		315			74				25	
93-94		786			73				45	24
94-95		806	649	--	69	49	40	--	41	23
95-96		514	369		68	55	35		23	15
96-97		819	596		57		46	40	41	62%

PELLET GROUP TREND

Transect (Elevation)	92-93	93-94	94-95	95-96	96-97
Mollies Nipple (6,000)	0	0	5	0	2
Nephi Pasture #1 (6,100)	71	52	129	109	117
Locke Ridge (6,200)	60	86	88	69	72
Skutumpah Pasture (6,900)	11	2	6	2	11
Willis Creek	32	45	51	14	45
Toms Point	115	72	156	114	134
Buckskin Mountain	108	89	117	65	58
Buckskin Mountain East	160	135	201	85	175
Average	70	60	94	57	102
Summer Pellet Group Trends					
Buck Knoll (8,000)	75	145	103	117	80
Cougar Hollow (8,500)	126	146	165	114	117
Average	101	146	134	116	99

* * * MANAGEMENT PLAN SYNOPSIS * * *

DEER HERD UNIT #53

KAIPAROWITS

Status: Small Population on large area. Most concentration on Canaan Mountain and Kaiparowits Plateau.

Management

Objective: No current deer management plan. Develop plan in next three years.

Problems &

Strategies: Increased hunter pressure may be excessive for quality hunt on this limited population.

- Water may be limiting factor in some areas.

Feral cattle on Kaiparowits Plateau now mostly controlled.

- BLM to make final follow-up to assess that wild cattle are no longer a problem.

BOUNDARY DESCRIPTION

Garfield and Kane counties - Boundary begins at Highway SR-12 and the Paria River near Cannonville; then easterly on SR-12 to Hole-In-Rock Road; then southerly on the Hole-In-The-Rock Road to Harris Wash; then easterly along Harris Wash, across the Escalante River, continuing easterly along Silver Falls Creek and North Fork of Silver Falls Creek to the east boundary of Capitol Reef National Park; southerly along this boundary to Hall's Creek; southerly along this creek to Lake Powell; southwesterly along the west shore of Lake Powell to the Utah-Arizona state line; west along this state line to the Paria River; northerly along this river to SR-12.

RANGE AREA AND APPROXIMATE OWNERSHIP*

	Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%
TOTAL				

DEER HERD UNIT 53 - KIAPAROWITS**HARVEST SUMMARY**

		Harvest				Permits	
Year	Hunters Afield	Buck	Antler- less	Total	% Succ.	Auth.	Sold
1992	327	85	0	85	26		
1993	362	87	0	87	24		
1994	206	69	0	69	34		
1995	250	81	0	81			
1996	89	31		31			

CLASSIFICATION DATA

Sample Size				Fawns/ 100 Does		Fawns/ 100 Adults		Bucks/ 100 Does		Bucks>2pt 100 does
Year	Pre	Post	Spr	Pre	Post	Post	Spr	Pre	Post	Post
91-92										
92-93										
93-94										
94-95		46			32	21			52	32
95-96					NO	DATA				

III. ELK

A. HISTORY OF ELK MANAGEMENT IN UTAH

Elk herds were prevalent throughout the mountainous areas of northern and central Utah prior to settlement by white man. Unrestricted hunting following settlement eliminated most of the elk from its natural ranges by the turn of the century. Only the Uinta Mountains supported a native elk herd when Utah entered into the first interstate elk transplanting program.

Elk were given protection with closed seasons about 1898. To reestablish elk onto ranges where they were previously found, interstate elk transplants were started in 1912 and continued until 1925.

Elk received from Yellowstone National Park were released on the Fishlake, Oquirrh Mountains, Mt. Nebo, Logan Canyon and East Mountain on the Manti National Forest.

Sportsmen in Smithfield also obtained a few head in Montana and released them in Smithfield Canyon during the 13-year period. The last interstate transplant was made in Utah County on Mt. Timpanogos in 1925. Subsequent transplants were made, but they were trapped from established herds in the state.

Elk adapted to their new home and began reproducing satisfactorily.

Because of deteriorating range conditions and agricultural damage problems, the Board of Elk Control, later to be known as the Board of Big Game Control, was established to cope with problems of the rapidly increasing elk herds. The Board authorized the first elk hunt in 1925 on the Cache and Mt. Nebo.

Elk hunts in Utah were on a limited basis until 1967 when the Board of Big Game Control authorized the first General Bull (Open Area Bull) hunt. This type hunt was in force on 5 elk units during this initial year. Three additional units were added in 1968 and maintained in 1969; and in 1970, open area bull hunting was extended statewide, except for the Heaston and Indian Peaks units. This open area bull type hunt continued through 1979, with the exception of Mt. Dutton being limited to 25 permits and Pilot Mountain was closed to hunting.

Two new elk units were open to elk hunting for the first time in 1979, making a total of 25 elk management units. Monroe Mountain was opened to elk hunting in 1982 and the Panguitch Lake area was opened to hunting in 1983, making a total of 27 elk units. The Pahvant Mountain and Delores Triangle were hunted for the first time in 1984. In 1985, the Paunsaugunt unit was opened, and Canaan Mountain was added to the Barney Top portion of the Boulder Mountain unit and opened as a separate unit. With realignment of the Ogden River unit, the Morgan-South Rich unit was created in 1984, making a total of 33 management units.

General season bull permittees were initially restricted to purchase of a permit every fifth year. In 1970, the waiting period was reduced so that a hunter could purchase a permit every third year. In 1971, it was reduced to every other year; and in 1972, the waiting period was completely removed.

A special archery elk season bull hunt was authorized for the first time in 1971, with an unlimited number of permits available. It was held each year since 1971 concurrent with the archery deer season. An archery elk permittee cannot purchase a regular general season bull permit. Currently, two hundred fifty archery season bull permittees are randomly selected by a public drawing, and their permits are validated as hunter's choice. Since 1987, the archery elk season has opened on the last weekend of the archery deer season, and continues for 16 days. This schedule was continued in 1989. Elk muzzleloader seasons have also been established since 1985. Two hundred fifty resident and 25 nonresident muzzleloader permits were sold for the 9 day season. Muzzleloader elk permits were increased to 300 residents and 30 nonresident permits in 1988.

Prior to 1972, elk hunting in Utah was restricted to residents only. The Board of Big Game Control in that year authorized the sale of 100 nonresident general season bull permits. That same number was authorized each subsequent year until the 1977 season when 125 were authorized and sold. In 1979, the board of Big Game Control removed the limit on nonresident general season bull elk permit sales. However, the price of the permit and the low success has limited the nonresident sales. Only 699 nonresident permits were sold in 1986.

With the inception of general season bull hunting in 1967, hunters were required to choose whether they would purchase an general season bull permit or apply for a restricted permit. The general season bull permit sales period was deliberately ended prior to the restricted permit application period, and thus did not allow unsuccessful applicants to purchase an general season bull permit until 1977. This system had been designed specifically to limit the number of general season bull hunters afield.

It is obvious from a comparison of general season bull permit sales in 1977 with previous years that the system worked well. In 1977, the procedure was changed to require first the purchase of an general season bull permit before a hunter was eligible to apply for a restricted permit. This change in procedure resulted in a very sharp increase in permit sales--from 17,652 in 1976 to 28,692 in 1977 (63 percent). This procedure was followed again in 1978 and resulted in 32,142 permits being sold, an additional 12 percent increase over 1977 permit sales. In 1979, a person was given the option of receiving or not receiving an general season bull permit if not successful in drawing a restricted permit. It was believed that this procedure would reduce the number of general season bull elk hunters. However, general season bull elk permit sales increased to 37,645, another increase of 17 percent. During 1980, the permit sales period was shortened and the general season bull permit fee was increased from \$15 to \$30. The restricted elk permit fee increased from \$25 to \$35. The net result was a 53 percent decrease in permit sales from 1979. The same application procedure was followed in 1981 as in 1980 and general season bull permit sales increased to 19,747. This same procedure was followed in 1982 and 1983, resulting in the sales of 21,308 and 20,209 general season bull elk permits.

Since 1984, the sales period for general season bull permits has been extended to the day before the season started. Permit sales between 1984 and 1987 stabilized to slightly less than 28,000 permits. In 1988, general season bull permit sales increased to 31,853, and in 1989 to 32,251. A record 36,096 general season permits were sold in 1990, indicating a significant interest in elk hunting.

General season elk permit sales continued to increase in 1991 and 1992. A record elk harvest of 10,432 elk was reached in 1992. In 1990, yearling bull only hunts were established on the Manti, Fishlake and Parker Mountain elk herd units. In 1992, four more units were established for yearling bulls only. The Manti and Fishlake units were authorized a limited number of "any bull" permits in 1992.

Severe winter conditions in 1992-93 contributed to the loss of about 175 elk on Salt Lake City's east bench, between Emigration Canyon and Millcreek Canyon.

The DWR relocated 17 elk in 1993 to Antelope Island at the request of the Utah Division of Parks and Recreation. This introduction effort failed because the elk left the island.

Since 1995, Utah's general season elk management strategies have been built around a "spike bull" and "any bull" unit concept with a maximum of 36,000 permits available annually divided between the two programs. In 1996, 20,700 spike bull and 15,300 any bull permits were available.

B. YEARLY SUMMARY OF UTAH'S RIFLE ELK AND ANTLERLESS HARVEST 1931-1970

YEAR	PERMITS		SOLD	TOTAL	*HUNTERS	HARVEST				%	
	BULL	COW	H.C.		AFIELD	BULL	COW	CALF	H.C.	TOTAL	SUCC.
1931	184		75	259	256	99			26	125	49
1932	191		58	249	246	140			49	189	77
1933	201		150	351	346	162	2		71	235	68
1934	143		281	424	418	179	44		96	292	70
1935	60		297	357	352	146	37		22	205	58
1936	60		160	220	217	92	49		12	153	70
1937	151	53	47	251	248	119	69			188	76
1938	193	172	150	515	508	186	195		49	430	85
1939	328	408		736	726	261	380			641	88
1940	522	406		928	916	455	383			838	91
1941	419	378	74	971	860	390	391			781	91
1942	426	394	146	966	954	374	385			759	80
1943	429	291	112	832	821	303	261			564	69
1944	262	123	195	580	572	172	90		170	432	76
1945	335	145	220	700	691	312	250			562	81
1496	395	215	450	1,060	1,031	483	362			845	82
1947	260	125	850	1,235	1,208	502	563			1,065	88
1948	25	10	875	910	902	307	481			788	87
1949	175	95	655	925	914	374	343			717	78
1950	305	70	1,305	1,680	1,669	754	649			1,403	84
1951	350	136	1,335	1,821	1,807	903	704			1,507	83
1952	340	120	1,330	1,760	1,750	641	682			1,323	76
1953	210	115	1,172	1,497	1,491	471	496			967	65
1954	190		1,160	1,350	1,332	423	425			848	64
1955	281		1,192	1,491	1,461	413	345	92		850	58
1956	357		4,063	1,420	1,407	434	298	85		817	58
1957	513		1,299	1,812	1,768	487	356	89		932	53
1958	580		1,460	2,040	2,019	563	416	96		1,075	53
1959	680	10	1,493	2,183	2,176	638	462	120		1,220	56
1960	830		1,451	2,281	2,253	649	423	101		1,173	52
1961	1,020		1,550	2,590	2,526	643	393	82		1,118	44
1962	1,130		1,392	2,522	2,478	697	383	93		1,173	47
1963	1,191		1,373	2,564	2,519	647	338	60		1,045	41
1964	1,228		1,233	2,461	2,418	632	334	67		1,033	43
1965	1,386		1,119	2,505	2,480	678	271	48		997	40
1966	1,545		798	2,343	2,302	657	226	27		910	40
1967	4,195		260	4,455	4,278	964	52	13		1,029	24
1698	6,086		176	6,262	6,036	1,286	49	17		1,352	22
1969	5,005		457	5,462	5,215	1,173	149	19		1,341	26
1970	9,639		715	10,354	10,008	1,762	203	30		1,995	20

*HUNTERS AFIELD FROM 1931-1943 INCLUSIVE ARE ESTIMATED.

B. Yearly Summary of Elk Harvest 1971 - present

	Archery			Any Weapon			Muzzleloader			Restricted/Control			Total		
Year	Bulls	Antlerless	Hunters Afield	Bulls	Antlerless	Hunters Afield	Bulls	Antlerless	Hunters Afield	Bulls	Antlerless	Hunters Afield	Bulls	Antlerless	Hunters Afield
1971	5		222	1438		9149							1443	0	9371
1972	9		149	1887		15780							1896	0	15929
1973	18		291	1901		23604							1919	0	23895
1974	16		316	1659		17336							1675	0	17652
1975	23		273	1724		18631							1747	0	18904
1976	41	4	475	1709		18546							1750	4	19021
1977	35	16	665	2391		28908							2426	16	29573
1978	65	17	866	3026		32678							3091	17	33544
1979	77	20	1453	2533		36616							2610	20	38069
1980	71	25	1006	1980		18615							2051	25	19621
1981	66	22	1119	2659		20306							2725	22	21425
1982	83	24	1389	2986		20953							3069	24	22342
1983	59	24	1405	3478		20254							3537	24	21659
1984	85	34	1657	4030		27351							4115	34	29008
1985	147	42	1971	4586		27077	52		239				4785	42	29287
1986	204	31	1910	3715		27317	82		256				4001	31	29483
1987	287	20	2478	4265		29009	77		271				4629	20	31758
1988	341	45	3842	5976		33759	117		329				6434	45	37930
1989	190	22	3336	6104		35204	128		321				6422	22	38861
1990	265	31	3195	6017		39740	123		328				6405	31	43263
1991	266	71	4439	5846		42318	87		325				6199	71	47082
1992	375	104	4687	6878		42910	88		327				7341	104	47924
1993	256	133	5468	5700		42365	110	59	539				6066	192	48372
1994	345	101	5387	5420		45057	137		532				5902	101	50976
1995	344	303	6729	3660		27156	80	185	1043	1241	3987	8670	5325	4476	43598
1996	383	419	6170	4173		26992	143	342	1045	677	3916	6867	5376	4677	41074
Total	4,056	1,508	60,898	95,741	0	727,631	1,224	586	5,555	1,918	7,903	15,537	102,939	9,998	724,949

1. General Season Bull Harvest Calculation

The 1996 general elk season (open area bull) opened on October 9 and ran through October 17. After the close of the season 6,132 of the 28,735 permit holders were contacted by telephone by an independant surveying firm to obtain results of their hunt. This was the eleventh year of a telephone survey for determining the general season bull elk harvest. It is believed that the telephone survey eliminates the nonresponse bias contained in the mailed questionnaire survey and that accurate data can be obtained with a smaller sample size. The problem of assigning the data to the correct herd unit has been minimized.

A projection of the survey data indicated that 26,992 elk hunters were afield and 1,743 did not hunt.

The 1996 general season bull elk harvest was 4,173 bulls. The calculation was made from a sample of approximately 21.5 percent of all permittees.

Since 1979, an unlimited number of general season bull elk permits have been authorized for nonresidents. Nonresident permittees were sampled at the same time as the resident general season bull elk hunters. The results are summarized below.

a. General Season Bull Harvest, 1996

UNIT	BULL HARVEST			AVG.	
	HUNTERS	% SUCCESS		HUNTER	HUNTER
	AFIELD	NUMBER		DAYS	DAYS
BEAVER(33)	537	85	16%	4121	7.7
BOULDER(37)	1127	161	14%	5707	5.1
CACHE*(2)	1166	114	10%	5654	4.8
CEDAR MTN(40)	201	5	2%	1086	5.4
CHALK CREEK(6)	559	147	26%	2352	4.2
CEDAR MTN(40)	380	50	13%	1777	4.7
DAGGETT(9)	898	115	13%	4951	5.5
DIAMOND FORK*(21)	1324	212	16%	6333	4.8
EAST CANYON(5)	275	87	32%	1189	4.3
FISHLAKE*(31)	2482	516	21%	12778	5.1
KAMAS(7)	1141	142	12%	5679	5.0
MANTI*(23)	3640	573	16%	17984	4.9
MOAB(26)	872	142	16%	4682	5.4
MORGAN-RICH(4)	1188	243	20%	5554	4.7
NEBO*(22)	1199	180	15%	5535	4.6
NORTH SLOPE(8)	1548	169	11%	8323	5.4
OGDEN(3)	766	69	9%	3403	4.4
RANGE CRK.(24)	252	27	11%	1424	5.7
CURRENT CRK.*(13)	2060	308	15%	10062	4.9
SOUTH SLOPE(12)	1501	244	16%	7554	5.0
TIMPANOGOS(18)	754	116	15%	3554	4.7
VERNAL(11)	2512	371	15%	12993	5.2
UNKNOWN	610	97	16%	891	1.5
TOTAL	26992	4173	15%	133586	4.9

* Antler point restriction, spike bull only.

2. Limited Entry Elk Permit Harvest

In 1996 there were 6,360 antlerless and 791 bull only permits authorized. In addition, the Ute Indian tribe received 11 bull and 22 antlerless permits for distribution, but harvest data does not include tribal permit harvest. Harvest questionnaires were mailed to all permittees requesting their hunt information, the results are summarized below.

1996 Limited Entry Bull Elk Harvest.

UNIT	PERMITS	HUNTERS AFIELD	HARVEST		NO. OF HUNTER DAYS	AVG. HUNTER DAYS
			BULLS	% SUCCESS		
Pilot Mtn. (01)	6	6	6	100%	20	3.3
Grouse Creek (01)	6	6	3	50%	41	6.8
North Cache (02)	55	55	47	85%	398	7.2
South Cache (02)	22	22	19	86%	215	9.8
Kamas (07)	5	5	0	0%	58	11.6
Daggett (09)	22	22	20	91%	125	5.7
Three Corners (10)	31	31	28	90%	150	4.8
Diamond Mtn (11)	66	66	55	83%	371	5.6
Vernal (11)	17	17	14	82%	156	9.2
South Slope (12)	33	33	20	61%	257	7.8
Current Creek (13)	5	5	4	80%	58	11.6
N. Avintaquin (14)	11	11	11	100%	110	10.0
Anthro Mtn. (15)	11	11	11	100%	86	7.8
Bitter Crk. (16)	72	72	67	93%	607	8.4
Little Crk. (17)	42	42	42	100%	155	3.7
Heaston (North and South) (19)	55	55	44	76%	188	3.4
Deep Crk. (20)	11	11	11	100%	46	4.2
Diamond Fork **(21)	15	14	12	80%	60	4.0
Nebo (22)	5	5	5	100%	32	6.4
Manti (23)	55	55	53	96%	381	6.9
Range Crk. (24)	22	22	22	100%	186	8.5
Buckhorn (25)	2	2	2	100%	26	13.0
Dolores Triangle (27)	3			0%		0.0
San Juan (28)	17	17	17	100%	158	9.3
Pahvant** (30)	21	21	17	81%	102	4.9
Fishlake** (31)	27	27	23	85%	157	5.8
Monroe** (32)	27	25	21	78%	119	4.4
Indian Peaks** (34)	32	32	27	84%	191	6.0
Panguitch Lake** (35)	32	32	29	91%	154	4.8
Mt. Dutton*** (36)	55	55	41	75%	347	6.3
Barney Top (38)	4	4	3	75%	28	7.0
Paunsaugunt (39)	4	4	3	75%	11	2.8
TOTAL	791	785	677	86%	4993	6.3

**includes archery and muzzleloader hunts.

1996 Antlerless elk harvest.

Hunt #	Unit Name	Permits Given Out	Total Hunters	Ave Hunter Days	Total Days Afield	Hunter success	Total Harvest
1399	Pilot Mtn	9	9	3.22	29	55.6%	5
2400	Millville Face	66	62	5.39	334	37.1%	23
2401	Millville Face	33	32	5.13	164	93.8%	30
2402	Richmond-Clarkston	11	11	2.36	26	100.0%	11
2403	Richmond-Clarkston	7	5	2.80	14	100.0%	5
2404	Logan-Smithfield	33	33	3.48	115	87.9%	29
2405	Logan-Smithfield	22	21	2.67	56	100.0%	21
2406	Rich	66	66	3.50	231	69.7%	46
2407	Rich	44	40	3.63	145	50.0%	20
2398	Garden City	66	61	5.30	323	65.6%	40
2408	Logan Canyon, North	22	20	2.35	47	95.0%	19
2409	Logan Canyon, South	22	22	4.32	95	31.8%	7
3410	E. Ogden	61	61	4.28	261	37.7%	23
3411	Huntsville	44	44	4.02	177	90.9%	40
3412	Huntsville	55	54	2.74	148	94.4%	51
3413	NE Ogden	33	32	4.59	147	37.5%	12
3414	NE Ogden	50	48	6.90	331	81.3%	39
3415	NE Ogden	50	50	3.86	193	94.0%	47
3416	NW Ogden	39	39	6.49	253	87.2%	34
4417	NW Ogden	39	37	3.27	121	94.6%	35
4418	S. Rich	28	16	3.25	52	25.0%	4
4419	S.Rich	28	24	3.25	78	75.0%	18
4420	W. Lost Crk	22	22	3.32	73	50.0%	11
4421	E Lost Crk	44	35	4.03	141	42.9%	15
4422	Henefer/Echo	33	30	2.17	65	70.0%	21
4423	Henefer/Echo	33	31	2.68	83	38.7%	12
4424	Weber Cnty	44	39	4.23	165	15.4%	6
4425	Weber Cnty	17	14	3.71	52	92.9%	13
4426	Weber Cnty	17	51	2.29	117	15.7%	8
4427	Morgan Cnty	33	29	4.86	141	69.0%	20
4428	Morgan Cnty	11	10	3.40	34	100.0%	10
4429	North Summit	33	33	2.63	113	81.8%	27
5430	East Canyon	83	75	4.53	340	22.7%	17
5431	Morgan-Summit	44	39	3.77	147	74.4%	29
5432	Davis/N. S.L.	22	22	4.00	88	36.4%	8
5433	Davis/N. S.L.	22	21	2.71	57	71.4%	15
6434	Chalk Crk.	182	172	3.78	651	42.4%	73
6435	S Chalk Crk.	220	185	3.68	680	69.2%	128
6436	N Chalk Crk.	165	137	2.85	391	79.6%	109
6437	Chalk Crk.	28	27	4.19	113	29.6%	8
6438	E Coalville	22	22	2.32	51	77.3%	17
7439	Kamas/Oakley	22	21	3.33	70	71.4%	15
7440	Kamas/Oakley	28	26	4.19	109	92.3%	24
7441	Kamas/Francis	17	17	6.06	103	52.9%	9
7442	Kamas/ Francis	28	24	7.17	172	50.0%	12
7443	Kamas/W. Hills	17	17	6.06	103	64.7%	11
8444	N Slope	110	107	5.51	590	29.0%	31
8445	Burnt Fork/Henry's Fork	28	26	4.23	110	69.2%	18
8446	Burnt Fork/Henry's Fork	28	27	4.59	124	70.4%	19
9447	Daggett	127	124	4.46	553	74.2%	92
9448	Daggett/Greendale	91	89	3.55	316	84.3%	75
10449	Three Corners	22	22	4.09	90	63.6%	14
11450	Ashley/Deep crks	28	25	10.76	269	32.0%	8

11451	Ashley/Deep Crks.	55	54	4.35	235	70.4%	38
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Antlerles

s Elk Harvest cont.

Hunt #	Unit Name	Permits Given Out	Total Hunters	Ave Hunter Days	Total Days Afield	Hunter success	Total Harvest
11452	Vernal, Forest Part	55	55	4.15	228	78.2%	43
11453	Diamond Mtn	66	65	3.97	258	67.7%	44
11454	Diamond Mtn	66	65	4.85	315	72.3%	47
12455	South Slope	440	425	5.75	2443	53.6%	228
13456	Red Crk.	110	109	3.65	398	81.7%	89
13457	Strawberry River	50	44	5.61	247	27.3%	12
13458	Currant Crk.	55	54	3.54	191	66.7%	36
14459	N. Avintaquin W.	28	28	4.29	120	50.0%	14
14460	N. Avintaquin	83	82	4.87	399	56.1%	46
16461	Anthro Mtn.	44	44	2.59	114	93.2%	41
16462	Bitter Crk.	17	16	4.31	69	75.0%	12
18463	Alpine	4	4	3.25	13	100.0%	4
20464	Deep Creek	17	16	3.81	61	50.0%	8
20465	Deep Creek	17	17	5.65	96	35.3%	6
21466	Diamond Fork/Utah Cnty	33	30	3.63	109	73.3%	22
21467	Diamnd Fork/Springville	39	39	4.67	182	59.0%	23
21468	Diamnd Fork/Springville	39	38	3.03	115	78.9%	30
21469	Diamond Fork/Wasatch	h22	22	2.50	55	100.0%	22
22470	North Nebo	138	137	4.15	569	52.6%	72
22471	West Nebo	55	55	7.44	409	56.4%	31
23472	NW Manti	110	108	5.08	549	80.6%	87
23473	SW Manti	110	104	6.28	653	73.1%	76
23474	Manti (Priv)	110	106	3.70	392	49.1%	52
23475	S Manti	110	107	3.81	408	59.8%	64
23476	Cent Manti	110	109	3.76	410	75.2%	82
23477	N Manti	110	102	3.81	389	64.7%	66
23478	Manti, Emery	55	55	7.85	432	80.0%	44
23479	Price Canyon	110	107	7.08	758	71.0%	76
23480	Mohrland-Stump Flat	55	54	6.56	354	90.7%	49
23481	Horn-Trail Mtn	220	212	6.61	1402	60.4%	128
24482	Range Crk	44	43	3.53	152	53.5%	23
26483	Moab	330	315	3.76	1183	67.6%	213
28484	West Summit	55	49	4.92	241	73.5%	36
30485	Pahvant	88	88	7.90	695	68.2%	60
30486	Fish Lake	110	104	3.94	410	70.2%	73
30487	Fish Lake	110	107	3.72	398	90.7%	97
32488	Monroe Mtn.	55	54	2.93	158	92.6%	50
32489	Monroe, South	55	53	3.70	196	69.8%	37
34490	Indian Peaks, South	17	17	3.47	59	100.0%	17
35491	Panguitch, Little Val.	22	22	3.18	70	81.8%	18
35492	Panguitch, Buckhorn	8	8	4.38	35	100.0%	8
36493- 36496	Mt. Duton	407	385	4.86	1870	54.0%	208
37497	Boulder, Sweetwater	33	30	5.03	151	83.3%	25
37498	Boulder, Dry Wash	22	21	4.14	87	42.9%	9
40499	Cedar Mountain	22	17	2.88	49	94.1%	16
Totals		6360	6082	4.53	27578	64.4%	3916

3. Archery Elk Harvest

1996 Archery Elk Hunt

The archery elk hunt was held August 29 through September 13, 1996 except within the Wasatch Front extended archery area where the season lasted until December 15, 1996. There were 6,556 permits sold with an estimated 6,170 hunters afield. Phone contact was made with 1,693 of those permit holders to determine harvest success and days afield. The results are summarized below.

(a) Summary of 1996 Archery Elk Harvest

	Hunters Afield	Total Days	Cows	Bulls	Total Hrvt	% Hrvt
BEAVER(33)	85	534	0	0	0	0.0%
BOULDER(37)	194	1173	4	4	8	4.1%
CACHE*(2)	492	3528	27	31	58	11.8%
CEDAR MTN(40)	74	407	4	0	4	5.4%
CHALK CREEK(6)	66	314	0	4	4	6.1%
DAGGETT(9)	101	616	4	12	16	15.8%
DIAMOND FORK*(21)	430	2436	46	35	81	18.8%
EAST CANYON(5)	74	639	4	4	8	10.4%
FISHLAKE*(31)	643	3931	66	74	140	21.8%
KAMAS(7)	143	898	8	12	20	14.0%
MANTI*(23)	972	5882	62	43	105	10.8%
MOAB(26)	182	1185	27	12	39	21.4%
MORGAN-RICH(4)	58	329	0	12	12	20.7%
NEBO*(22)	414	2699	43	19	62	15.0%
NORTH SLOPE(8)	85	461	4	0	4	4.7%
OGDEN(3)	62	364	0	12	12	19.4%
RANGE CRK.(24)	35	221	4	0	4	11.4%
CURRENT CRK. *(13)	612	3795	46	39	85	13.9%
SOUTH SLOPE(12)	190	1197	12	12	24	12.6%
TIMPANOGOS(18)	205	1599	15	12	27	13.2%
VERNAL(11)	674	4442	31	31	62	9.2%
UNKNOWN	379	2769	12	15	27	7.1%
Total	6170	39419	419	383	802	13.0%

*Denotes spike only unit.

3. Muzzleloader Elk Harvest

1996 Muzzleloader Elk Hunt

The annual muzzleloader elk hunt was held in 1996 for a limited number of elk hunters on a drawing basis. There were 1000 resident permits and 100 nonresident permits sold through the big game drawing. A season of October 30 to November 7, was authorized on all open elk units.

(a) Summary of 1996 Muzzleloader Elk Harvest

	Hunters Afield	Total Days	Cows	Bulls	Total Hrvt	% Hrvt
BEAVER(33)	20	93	0	3	3	15.0%
BOULDER(37)	50	272	17	7	24	48.0%
CACHE*(2)	40	149	10	13	23	57.5%
CEDAR MTN(40)	30	66	3	0	3	10.0%
CHALK CREEK(6)	20	103	0	7	7	35.0%
DAGGETT(9)	76	398	40	7	47	61.8%
DIAMOND FORK*(21)	43	295	13	10	23	53.5%
EAST CANYON(5)	40	172	3	10	13	32.5%
FISHLAKE*(31)	63	40	30	10	40	63.5%
KAMAS(7)	30	109	10	7	17	56.7%
MANTI*(23)	99	580	56	13	69	69.7%
MOAB(26)	23	126	7	3	10	43.5%
MORGAN-RICH(4)	56	388	10	10	20	35.7%
NEBO*(22)	43	202	13	3	16	37.2%
NORTH SLOPE(8)	56	215	30	10	40	71.4%
OGDEN(3)	60	358	13	3	16	26.7%
RANGE CRK.(24)	17	86	7	0	7	41.2%
CURRENT CRK.*(13)	63	309	17	7	24	38.1%
SOUTH SLOPE(12)	93	510	13	13	26	28.0%
TIMPANOGOS(18)	33	116	7	3	10	30.3%
VERNAL(11)	80	368	43	0	43	53.8%
UNKNOWN	10	60	0	4	4	40.0%
Total	1045	5015	342	143	485	46.4%

*Denotes spike only unit.

4. Elk Damage Control Hunts - Depredation, Mitigation and Landowner Permits

The Board of Big Game Control authorized the use of depredation hunts to control big game damage. Hunters with an unused elk tag can be authorized to participate in a depredation hunt to control localized elk damage. Hunters are chosen from a list of potential hunters compiled by the Division. Mitigation permits are given to landowners in response to big game depredation problems. Mitigation and depredation permits allow for the taking of antlerless animals only. Landowner permits are given to landowners for limited entry units and their numbers are designated prior to the season in the proclamation. Landowner permits allow bulls to be taken on these units.

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK MANAGEMENT UNIT #1

BOX ELDER

Status: This unit is divided into 2 sub-units; Grouse Creek (1A) and Pilot Mountain (1B). Private land ownership and attitudes makes agricultural depredation on sub-unit 1A virtually impossible to completely address. Habitat improvement will be paramount to the future of elk populations on this sub-unit. On sub-unit 1B, elk populations are currently approaching 380 animals and are exhibiting a slight upward trend.

Objective: Manage the unit for 2 limited entry hunts. Maintain a population of 275 elk on the Grouse Creek sub-unit and 400 wintering elk on the Pilot Mountain sub-unit.

Problems & Strategies:

- Elk depredation on private agricultural lands
- Ⓒ Continue to improve winter range with cooperative habitat projects.
 - Ⓒ Use hunter depredation pool, antlerless hunts and landowner mitigation permits to address immediate problems.
 - Ⓒ Continue haystack fencing where possible.

BOUNDARY DESCRIPTION

Box Elder, Tooele, Salt Lake, Davis and Weber counties - Boundary begins at the Utah-Idaho state line and Interstate 15; then west along this state line to the Utah-Nevada state line, south along this state line to Interstate 80, east on I-80 to I-15, north on I-15 to the Utah-Idaho state line.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management		
Private		
State		
TOTAL		

HARVEST TREND SUMMARY*

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992	151	24	100	12	36	24	156	12
1993	26	6	100	8	14	54	6	28
1994*	34	12		14**	26		17	11
1995*	21	10		5	15	71	12	9
1996*	21	9		20**	29	75	12*	19*

*NO PHU DATA **INCLUDES DEPREDATION HARVEST

ELK HERD UNIT #1 - BOX ELDER (Continued)**CLASSIFICATION SUMMARY**

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	279		39		36		*	
93-94	159	211	29	31	31	31		
94-95	181		38		15		12	
95-96	52	271	35	44	18	23	12	14
96-97	98	317	43	37	42	40		35

*Mature bulls were not counted separately, although 279 animals were classified as bull, cow, or calf.

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #2

CACHE

Status: The elk population has remained relatively stable at about 2,300 animals. Approximately 700 elk are fed at the Hardware Ranch. An additional 250 animals are fed on the Millville Face. Current population levels will be adjusted based on range conditions and habitat improvement projects.

Objective: Manage the North Cache sub-unit as "limited-entry any bull" and manage the South Cache sub-unit as general season "spike only" and "limited-entry any bull".

Problems & Strategies:

Habitat Maintenance

- C Winter range is currently the limiting factor on this unit. Habitat funds should be used to acquire and enhance available habitat.
- C Obtain conservation easements where possible.

Crop depredation

- C Fence haystacks and conduct depredation hunts where necessary.

Evaluation of winter range

- C See deer herd #2 for range utilization data

BOUNDARY DESCRIPTION

Cache, Rich, Weber and Box Elder counties - Boundary begins at the Utah-Idaho state line and Interstate 15; then east along this state line to the Utah-Wyoming state line; south on this state line to Highway SR-16; north on SR-16 to Highway SR-39; west on SR-39 to the county road from SR-39 to Hardware Ranch (Ant Flat Road); north on the Ant Flat Road to Hardware Ranch and Highway SR-101; west on SR-101 to Highway US 89-91; southerly on US 89-91 to I-15; north on I-15 to the Utah-Idaho state line.

RANGE AREA AND APPROXIMATE OWNERSHIP

OWNERSHIP	Summer Area (acres)	Winter Area (Acres)
Forest service	258,883	24,100
BLM	19,204	102,894
Private	189,480	44,800
State	41,880	79,771
Wildlife Resources	0	23,000
TOTAL	509,447	244,565

HERD UNIT 2 - CACHE (continued)**HARVEST TREND SUMMARY***

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	1,336	238	0	264	502	22	55	351
1993	1,893	199	6	137	336	18	77	233
1994*	2,252	253		158	411		82	218
1995**	2,409	261	--	216	477		99	387
1996	1,672	178	--	310	488	19	80	483

*NO PHU DATA

** Includes PHU, Landowner, and Mitigation permits.

CLASSIFICATION DATA

	SAMPLE SIZE			CALVES/100 COWS			BULLS/100 COWS			MATURE/100 COWS		
YEAR	POST	TRD*	HDW	POST	TRD	HDW	POST	TRD	HDW	POST	TRD	HDW
92-93												
93-94		1356	476		32	25		6	3		3	2
94-95	--	--	499	74	--	47	21	--	5	6	--	3
95-96	--	1409	583	--	38	22	--	17	11	--	7	--
96-97	786	--		59	--		11	--		4		

* EXCLUDES HARDWARE RANCH DATA

HDW - Hardware Ranch data

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #3

OGDEN

Status: This elk unit is in good condition. The estimated winter population is 1,200 animals and it is scheduled to be flown this winter. Currently, mature bulls comprise 60% of the bull harvest, which indicates a satisfactory mature/yearling ratio. Late-season antler less hunts have kept elk on public property.

Objective: To maintain an elk population consistent with available winter range and minimize agricultural damage.

Problems & Strategies:

Depredation

- C Fence haystacks and herd where possible
- C Utilize late-season antler less hunting to keep elk on the limited public land.
- C Close the Middle Fork Wildlife Management Area after the last elk hunt to hold animals on that state property.
- C Use the PHU program to address antler less permitting requirements.

BOUNDARY DESCRIPTION

Weber, Box Elder, Cache, and Morgan counties - Beginning at Hyrum; then easterly on SR-101 to the Ant Flat Road (at Hardware Ranch); southerly on this road to SR-39; westerly and southerly on SR-39 to SR-167 (the new Trappers' Loop Road); southerly on this road to I-84; westerly on I-84 to I-15; northerly on I-15 to Exit 364 and U.S.-91; easterly and northerly on U.S.-91 to SR-101; easterly on this highway to Hyrum.

RANGE AREA AND APPROXIMATE OWNERSHIP*

OWNERSHIP	AREA (acres)		%	
Forest service				
Private				
State				
Wildlife Resources				
Other (Unclassified)				
TOTAL				

ELK HERD UNIT 3 - OGDEN (Continued)**HARVEST TREND SUMMARY***

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Antlerless	Total	% Success	Bull	Antlerless
1992	1,336	296	61	188	545	41	10	218
1993	1,287	130	48	96	274	22	--	175
1994*	1,278	230		159	389			211
1995	952	79		217		--	--	373
1996	831	86		351	437			446

*NO PHU DATA

CLASSIFICATION SUMMARY

	SAMPLE SIZE	CALVES/100 COWS	BULLS/100 COWS	MATURE BULLS/100 COWS
Year	Trend	Trend	Trend	Trend
92-93	901	53	35	
93-94	NO DATA			
94-95	NO DATA			
95-96	NO DATA			
96-97	882	39	53	36

PELLET GROUP TREND

TRANSECT (Elevation)	92-93	93-94	94-95	95-96
Ogden Canyon* (4,800)				
Uintah Junction* (4,800)				
Geertsen Canyon* (5,500)				
Maple Canyon* (5,600)				
Causey Dam* (6,000)				
Middle Fork* (5,800)				

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #4

MORGAN-S. RICH

Status: This elk herd is currently over herd unit objective. Antler less harvest was low last season due to warm weather. Most of this unit is enrolled in the PHU program, so antler less permitting is not a problem. Work on winter range is continuing.

Objective: To maintain elk populations at levels that are consistent with available range. To provide elk hunting opportunity both in the general season and "limited entry".

Problems &

Strategies:

Crop depredation

 C Schedule depredation hunts and fence stackyards where needed.

 C Use the PHU program to harvest antlerless animals.

BOUNDARY DESCRIPTION

Morgan, Rich and Summit counties - Boundary begins at the junction of Interstates 84 and 80 near Echo; then northeasterly on I-80 to the Utah-Wyoming state line; north along this state line to Highway SR-16; north on SR-16 to Highway SR-39 near Woodruff; west on SR-39 to the Rich-Weber county line; south along this county line to the Morgan-Weber county line; south and west along this county line to Highway SR-167 (Trappers Loop Road); south on SR-167 to Highway SR-30 at Mountain Green; west on SR-30 to I-84; east on I-84 to I-80.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
BLM		
State		
Private		
*TOTAL		

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992	1,880	316	86	929	1,245	66	11	902
1993	1,318	198	87	398	576	44	11	726
1994	1,701	297		710	1,007		5	991
1995	1,832 (245) ¹	153 (187) ¹	--	125 (313) ¹	778	42	--	912
1996								

¹ PHU harvest data

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93		3888		49		71		63
93-94								
94-95	--	3648	--	56	--	96	75	

95-96								
96-97								

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #5

EAST CANYON

Status: Elk populations are at or above herd unit objectives. Winter ranges have been decreasing in quality and quantity due to development. This unit is scheduled to be flown this winter.

Objective To maintain the elk herd in balance with available range and to minimize agricultural damage.

Problems & Strategies:

Habitat

- C Improve and acquire critical habitat where possible.
- C Convince planners and commissioners of the economic value of preserving big game winter range.

BOUNDARY DESCRIPTION

Morgan, Summit, Salt Lake and Davis counties- Boundary begins at the junction of Interstates 80 and 84 (Echo Junction); then south and west on I-80 to I-15; north on I-15 to I-84; east on I-84 to I-80.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
BLM		
State		
Private		
*TOTAL		

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992	368	99	53	6	99	27	--	--
1993	276	54	91	36	90	33	--	55
1994	535	59		88	147		--	198
1995	345	55		71	120	35	6	342
1996	511	92		77	169		1	171

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93								
93-94		692		45		10		
94-95								
95-96								
96-97		574		52		21		18

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #6

CHALK CREEK

Status: The 1995 winter count on this unit of 2,300 animals was over the herd unit objective. The mild winter precluded any significant antler less harvest. Winter range conditions are a concern and need to be addressed.

Objective: Work with landowners to establish quality habitat that will benefit elk and reduce depredation. Develop elk harvest programs to reduce the present elk population allowing range rehabilitation projects to become established.

Problems & Strategies:

Depredation

- C Use depredation hunts to address localized problems
- C Fence haystacks where feasible

Habitat

- C Improve available winter range
- C Curtail development of summer homes in critical elk range.

BOUNDARY DESCRIPTION

Summit and Duchesne counties - Boundary begins at the junction of Interstates 84 and 80 near Echo; then northeasterly on I-80 to the Utah-Wyoming state line; south and east along this state line to Highway SR-150; south on SR-150 to Pass Lake and the Weber River Trail; west on this trail to Weber Canyon and the Holiday Park road; west on this road to Highway SR-32; north and west on SR-32 to I-80 and Wanship; north on I-80 to I-84 near Echo.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
U.S. Forest Service	81,219	18
Private	369,115	82
State	2,068	1
TOTAL	452,402	

ELK HERD UNIT 6 - CHALK CREEK (Continued)**HARVEST TREND SUMMARY**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	1,649	359	60	286	645	39	16	495
1993	1,636	299	56	307	599	37	16	682
1994*	1,382	230		333	563		16	660
1995	1,433	58 (72) ¹	-- ²	158 (70) ¹	358	25	-	664
1996	645	158		262	420			

* NO PHU DATA

¹ PHU hunt data² Incomplete information**CLASSIFICATION SUMMARY**

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93		2056		50		16		28%
93-94	NO DATA							
94-95	NO DATA							
95-96		2295		44		19		--
96-97								

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #7

KAMAS

Status: Elk populations are slowly increasing and provide a variety of opportunity for hunting and viewing. Winter ranges are in fair condition however, some ranges have been impacted by summer home development.

Objective: Maintain the elk herd in balance with available winter range and keep agricultural depredation at a tolerable level.

Problems & Strategies:

Crop depredation
-Stackyard fencing, post-season and winter depredation hunts and crop damage payments.

BOUNDARY DESCRIPTION

Summit and Wasatch counties - Boundary begins at the junction of Interstate 80 and Highway SR-32 (Wanship); then south on SR-32 to the Holiday Park road at Oakley; east on this road to Weber Canyon and the Weber River Trail; east on the Weber River Trail to Highway SR-150 near Pass Lake; south on SR-150 to the Provo-Duchesne River drainage divide; south along this drainage divide to the Wolfe Creek Pass and Highway SR-35; west on SR-35 to Francis and Highway SR-32; west on SR-32 to Highway US-40 near Jordanelle; north on US-40 to I-80; north on I-80 to SR-32 and Wanship.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Area (acres)
Forest Service	230,400	78
Bureau of Land Management	500	
Private	35,400	12
State	28,400	10
Wildlife Resources	800	
TOTAL	295,500	100

*Surveyed 1961; F. & G. Bull. 62-5

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST					LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	850	118	50	61	179	21	5	61
1993	682	77		54	131	19	5	92
1994*	1,298	171		63	234	18	5	98
1995	1,465	171		71	242	17	5	147
1996	1,389	153		79	232		5	112

ELK HERD UNIT #7 - KAMAS (Continued)**CLASSIFICATION SUMMARY**

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	--	490	--	46	--	17	--	10
93-94	NO DATA							
94-95	--	613	--	37	--	6	--	2
95-96	NO DATA							
96-97		636		44		10		18

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #8

NORTH SLOPE

Status: The current winter elk population numbers less than 300. Management of elk on this unit needs to be coordinated with other units in Utah and units in Wyoming. Quality winter range is currently the limiting factor on this herd unit.

Objective: Manage this unit as an open, any bull unit. The current harvest strategy will only change if the yearling component exceeds 50% for 3 years or the hunter pressure continues to increase to an intolerable level for participating hunters.

Problems & Strategies:

Winter range

- C Work with federal land management agencies to improve and/or enhance winter range.
- Depredation
- C Continue to use multiple harvest strategies to minimize agricultural damage.

BOUNDARY DESCRIPTION

Summit County - Boundary begins at the Utah-Wyoming state line and Highway SR-150; then south on SR-150 to the Summit-Duchesne county line; east along this county line to the Burnt Fork-Sheep Creek drainage divide; north along this drainage divide to the Burnt Fork-Birch Creek drainage divide; north along this drainage divide to the Utah-Wyoming state line; west along this state line to SR-150.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service		
Private		
State		
TOTAL		

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Antlerless	Total		Bull	Antlerless
1992	2,179	280	72	57	337	15	44	82
1993	2,356	346	56	91	437	19	44	220
1994*	2,518	299		109			33	275
1995	2,090	127	--	116	243	--	--	308
1996	1,795	169		70	239			166

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		TOTAL	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93				44*				
93-94		131		34				
94-95	NO	DATA						
95-96		127		34		6		200

96-97	NO	DATA						
-------	----	------	--	--	--	--	--	--

* Wyoming Data

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #9

DAGGETT

Status: Range conditions and trend are generally good and improving. The winter of 1996-97 was wet with significant snow accumulation. Spring range rides found no areas of concern for this elk herd. Significant depredation problems occurred in the Manila area.

Objective: Provide general open bull and antlerless hunting to maintain numbers within the herd size objective.

Control elk numbers in agricultural areas to lessen depredation.

Problems & Strategies: Depredation of agricultural crops.

-Use depredation hunts when necessary.

High hunter densities.

-Review travel management plans and implement temporary or permanent road closures to improve hunter distribution.

Vehicle access.

-Maintain road closures in this unit.

BOUNDARY DESCRIPTION

Daggett and Summit Counties - Boundary begins at the Utah-Wyoming state line and the Burnt Fork-Birch Creek drainage divide; then east along this state line to the west shoreline of Flaming Gorge Reservoir; southeasterly along this shoreline to Cart Creek; southerly along this creek to Highway US-191; southerly on US-191 to the Daggett-Uintah County line (summit of the Uinta Mountains); westerly along this county line to the Summit-Duchesne county line; westerly along this county line to the Burnt Fork-Sheep Creek drainage divide; north along this drainage divide to the Burnt Fork-Birch Creek drainage divide; northerly along this drainage divide to the Utah-Wyoming state line.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	223,360	70
Bureau of Land Management	37,120	11
Private	46,720	15
State	10,880	4
TOTAL	318,080	

ELK HERD UNIT 9 - DAGGETT (Continued)**HARVEST TREND SUMMARY**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	1348 88	171 0	--	0 75	246	13 85		82
1993	1228 125	180 0	49 --	0 90	270	15 72		132
1994	1487 124	150 0	--	0 93	243	10 75		132
1995	1079 83 21	87 0 8	--	0 31 0	126	8 37	22	88
1996	896 215 22	114 0 19		0 169 0	302	13 79 86	22	221

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	156	--	46		9		3	
93-94	129	970	35		22		--	
94-95	196	--	30		11		1	
95-96	126	1408	40	31	25	10	4	2
96-97	58	--	59	--	12	--	3	--

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #10

THREE CORNERS

Status: Range conditions and trend are generally good and improving. The winter of 1996-97 was wet with heavy snow accumulations. Spring range rides found no areas of concern for this elk herd.

This unit is continuing to interact with the elk herds in Colorado and Wyoming. Bull/cow ratios are good. Harvest and the percentage of mature bulls harvested are also good. This unit should remain as a limited entry unit.

Objective: Provide high quality elk hunting with low hunter densities and to provide mature bull elk to harvest.

Control elk numbers in agricultural areas to lessen depredation.

Problems & Strategies:

Depredation of agricultural crops during spring and summer.

- Use depredation hunts when necessary.
- Cow harvest by Wyoming, Colorado and Utah.
- Continue cooperation with Tri-State Committee to manage this elk unit as one.

Elk-bighorn competition of Bear Mountain.

- Monitor vegetation. Work to unify agencies in the management of this unit.

Pinyon-juniper encroachment.

- Continue pinyon-juniper conversion treatment to provide optimum elk habitat.

Vehicle access.

- Maintain road closures in this unit.

BOUNDARY DESCRIPTION

Daggett County - Boundary begins at the Utah-Wyoming-Colorado state lines (3 Corners); then south along the Utah-Colorado state line to the Green River; west along this river to the east shore of Flaming Gorge Reservoir; northerly along this shore line to the Utah-Wyoming state line; east along this state line to the Utah-Wyoming-Colorado state lines (3 Corners).

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	44,160	36
Bureau of Land Management	64,640	52
Private	8,320	7
State	7,040	5
TOTAL	124,160	100

ELK HERD UNIT 10 - THREE CORNERS (continued)**HARVEST TREND SUMMARY**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	55 31	47 0	79	0 28	75	85 90	55	32
1993	43 27	42 0	70	25	67	98 93	43	27
1994	22			0 21		95	33	22
1995	33 21	30 0		0 21	51	90 100	33	22
1996	31 22	29 0		0 15	44	94 68	31	22

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	522	--	47		15		5	
93-94	384	225	45		11		3	
94-95	116	280	42		37		19	
95-96	149	250	37		12		8	
96-97	116	223	48		33			

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #11

VERNAL

Status: Range conditions appear to be recovering from the drought period. The population is being maintained at herd management plan objective.

Objective: Manage the elk herd for a limited entry hunt on the Diamond Mountain area and general open bull hunting on the remainder. Maintain a population of 2,500 elk with a wintering distribution of 1,000 head on Diamond Mountain and 1,500 head on the remainder of the unit.

Problems & Strategies:

Agricultural depredation and landowner complaints of elk damage on private rangelands.

-Conduct range improvement projects on adjacent public lands. Hold controlled hunts when necessary. Handle each complaint according to state law and DWR guidelines.

-Habitat degradation from mining projects, pipeline, and road construction.

-Work with administering agency to critically review any applications for such projects rejecting those that are totally unacceptable and requiring stringent reclamation/mitigation measures for those that are allowed.

-High hunter densities on some parts of the unit.

-Review travel management plans and implement temporary or permanent road closures to improve hunter distribution.

-Competition between livestock and elk on public lands.

-Work with BLM and USFS to improve grazing plans and systems. Specific concern areas are the grazing allotments overlapping spring-fall elk range.

BOUNDARY DESCRIPTION

Uintah County - Boundary begins at Highway US-40 and the Utah-Colorado state line; then south along this state line to the White River; west along this river to the Green River; west along the Green River to the Duchesne River; northwesterly along this river to the Uinta River; north along the Uinta River to Deep Creek; north along this creek to the Paradise Reservoir road; northerly on this road to Paradise Reservoir and the Whiterocks-Dry Fork drainage divide; north along this drainage divide to the Uintah-Daggett County line; east along this county line to Highway US-191; north on US-191 to Cart Creek; north along this creek to the east shoreline of Flaming Gorge Reservoir; east along this shoreline to the Green River; east along this river to the Utah-Colorado state line; south along this state line to US-40, excludes Dinosaur National Monument and all Indian Tribal Lands.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service		
Bureau of Land Management		
Private		
State		
National Monument		
TOTAL		

ELK HERD UNIT 11 - VERNAL (continued)**HARVEST TREND SUMMARY**

		HARVEST					CONTROL PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	2738	539		255	790	20		317
1993	2606 449	468	33	297	765	18 66		466
1994	2959 235	358		158	516	12		244
1995	2490 300 15	261 0 14		216	492	11 72 92	15	302
1996	2450 259 17	361 0 11		174	546	15 67 65	17	270

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		MATURE BULLS/100 COW	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	439	1847	41		10		2	
93-94	258	1779	36		10		0	
94-95	487	2,120	44		10		4	
95-96	148	1400 *	56	29	9	7	1	0.4
96-97	0	3,155	0	50	0	6	0	1

* Partial count - Helicopter class.

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #12

SOUTH SLOPE

Status: Overall this unit is in very good shape. Range conditions and trends are stable. Agricultural depredations were at a moderate level due to the above normal snowfall in the area.

Objective: Provide open bull hunting with a reasonable opportunity to harvest a mature bull and to maintain a population density consistent with available habitat.

Problems & Strategies:

Elk depredations on private agricultural lands.

- Continue to improve winter range with cooperative habitat projects aimed at short-stopping elk from migrating into the valley.
- Continue working with the Ute tribe in coordinating harvest numbers and season to address depredation.
- Continue haystack fencing and depredation hunts.

Vehicle access and road construction.

- Cooperate with USFS in developing access management plans.

Range Conditions.

- Cooperate with USFS to monitor elk/livestock interactions on spring and summer ranges.

BOUNDARY DESCRIPTION

Uintah, Duchesne and Wasatch counties - Boundary begins at the Duchesne and Uinta Rivers; northerly along the Uinta River to Deep Creek; northerly along this creek to the Forest Service road 104 (Paradise Reservoir road); northerly on this road to Paradise Park Reservoir and the Dry Fork - Whiterocks drainage divide; north along this divide to the summit of the Uinta Mountains (Uintah-Daggett and the Duchesne-Summit county line); west along this summit to Highway SR-150; southwesterly on SR-150 to the Provo-Duchesne Rivers drainage divide; south along this divide to Highway SR-35; east on SR-35 to Highway SR-87; south on SR-87 to Highway US-40 at Duchesne; east on US-40 to the Duchesne River; southeasterly on this river to the Uinta River (excluding all Ute Tribal lands within this boundary).

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Area (percent)
Forest Service	561,507	46
Indian	275,083	22
Private	389,680	32
Bureau of Land Management	1,003	< 1
TOTAL	1,227,273	100

ELK HERD UNIT 12 - SOUTH SLOPE (continued)**HARVEST TREND SUMMARY**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	2,122	332	--	218	550	26	--	290
1993	2,222	337	57	276	602	27		
1994	1,782	369		143	512	21	25	317
1995	1,611	259	--	132	391	16	36	440
1996	1,408	235	64	255	470	15	33	440

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		MATURE BULLS/ 100 cows	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	42	3945	57	--	38	--		--
93-94	129	3912	24	--	39	--		--
94-95	160	3141	46	--	16	--		--
95-96	584 (post)	3697	46 (post)	--	24 (post)	--	5	--
96-97	-	3730 ⁸	-	-	-	-	-	-

⁸Projected number as a small portion of the unit could not be flown due to weather.

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #13

CURRENT CREEK

Status: Summer range conditions on this unit are good, winter range conditions are becoming a concern in localized areas. The elk population is healthy. No classification or trend count flight was conducted for this unit in 1996-97. Overwintering survival of the calves was estimated to be slightly lower due to the harsh conditions this winter, but the decrease is not expected to have a significant impact on the herd. Good production and excellent hunting conditions combined for an increase in the bull harvest in 1996. The initiation of limited entry bull permits was successful and an increase in the number of permits was approved for 1997.

Objective: Provide open spike-bull elk hunting with limited entry opportunities for mature bulls. Maintain elk numbers consistent with range conditions.

Problems &

Strategies: Elk depredation on agricultural crops.
 -Continue fencing program. Antlerless permits will be issued to reduce depredation on private lands and to stabilize wintering populations.

Some habitat problems on UDWR lands.
 -Range improvement projects for sagebrush and pinyon-juniper.

Current Creek deer herd is one of the most productive in the state.
 -Monitor deer-elk interactions. Deer herd should not be sacrificed for a large elk herd.

BOUNDARY DESCRIPTION

Duchesne and Wasatch counties -Boundary begins at Duchesne; then north on Highway SR-87 to Highway SR-35; northwesterly on SR-35 to Francis and Highway SR-32; westerly on SR-32 to Highway US-40; south and easterly on US-40 to the Soldier Creek Dam road; south on this road to the Soldier Creek Dam and the Strawberry River; easterly along this river to Duchesne.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	167,671	37.7
Division of Wildlife	72,219	16.2
State	28,470	6.4
Bureau of Land Management	4,480	1.0
Ute Tribe	16,834	3.8
Private	155,246	34.9
TOTAL	444,920	100

ELK HERD UNIT 13 -CURRANT CREEK (continued)**HARVEST TREND SUMMARY**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	2,211	415	0.00	110	525	19	--	143
1993	1,812	278	0.00	299	577	15	--	418
1994	2,574	332	0.00	111	443	16	--	125
1995	1,895	259	0.00	97	356		--	260
1996	2,013	309	1.00	235*	544*	15	11*	320*

*-includes PHU & Landowner Mitigation harvest

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		% MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	253	1478	43	42	21	4	9	27
93-94	264	--	39	--	19	--	4	--
94-95	681	1410	52	50*	18	7*	27	50*
95-96	+	502*	+	52	+	10	+	1**
96-97	243***	837** *	61***	+	36***	+	25***	46***

*Subsample of trend count.

**A large portion of the herd leaves the unit before the classification period.

***Eastern portion of the unit only.

+No Data

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

ELK HERD UNIT #14

NORTH AVINTAQUIN

Status: Overall range conditions are good and considered improving with the elk herd remaining in good condition. Agricultural haystack depredation have been largely controlled. Some hayfield depredations still persist. This unit was reduced in size in 1993. In the past (1992 and previous), too many bulls have been harvested to maintain the quality and quantity of mature bulls that should be available on a limited entry unit. The number of bull permits has been reduced because of this and also because of the reduced size of the area. Sportsman indicate a desire for increased numbers of mature elk.

Management

Objective: Provide an elk hunting experience of high quality defined by low hunter density, high hunter success, high mature bull harvest and elk numbers consistent with range conditions.

Strategies: Hayfield depredations.

-Utilize control hunts concentrating on the Strawberry River area to nearly extirpate this subpopulation within 3 years.

Interagency coordination.

-Continue to improve communications between the Ute Tribe, Forest Service and DWR. Utilize annual coordination meetings to facilitate improved management coordination.

BOUNDARY DESCRIPTION

Duchesne, Utah, and Wasatch counties - Boundary begins at Duchesne and Highway US-191; then southerly on US-191 to the Reservation Ridge road; westerly and northerly on this road to Big Beaver Springs road; northerly on this road to Big Beaver Springs and Beaver Canyon drainage; northeasterly along this drainage to the Strawberry River; easterly along this river to Duchesne (excluding all Ute Tribal lands within this boundary).

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	103,341	43
Private	40,537	17
Indian	68,740	29
Wildlife Resources	26,323	11
TOTAL	238,941	100

ELK HERD UNIT 14 - NORTH AVINTAQUIN (continued)**HARVEST TREND SUMMARY**

		HARVEST					CONTROL PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	55	45	--	--	45	81	55	
1993	14	8	100	33	41	57	14	50
1994	14	13	100	171	184	93	14	289
1995	14	10	93	45	138	71	15	109
1996	14	14	100	58	72	100	14	111

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		MATURE BULLS/100 COW	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	192	--	43	--	13	--	4	--
93-94	130	--	46	--	8	--	5	--
94-95	248	852	46	--	28	12	7	6
95-96	+	+	+	--	+	+	+	+
96-97	+	1,374	+	39	+	31	+	18

+ No Data- This unit will be classified from helicopter ever other year.

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #15

ANTHRO

Status: The Anthro elk herd is in excellent condition with a high proportion of mature bulls in the population. Water availability is limited on the unit although the development of numerous guzzlers and watering structures has greatly enhanced elk distribution. Bull quality is good with the average age of harvested bulls being 6 years old.

Management

Objective: Provide high quality elk hunting with low hunter densities and large mature bull elk to harvest.

Strategies: **Depredation on agricultural crops.**

-Haystack fencing and depredation control hunts.

Water distribution

-Continue water development projects to disperse elk herd.

Conflicts with livestock especially on winter cattle allotments.

-Monitor range condition season of use and animal species use.

Indian Trust Land

-Continue working with Ute Tribe.

BOUNDARY DESCRIPTION

Duchesne and Uintah counties - Boundary begins at Duchesne and Highway US-191; then southwesterly on US-191 to the Argyle Canyon road; southeasterly on this road to Nine Mile Canyon Road; east along this road to its end near Bulls Canyon; south from the end of the road to Nine Mile Creek; east along this creek to the Green River; north along this river to the Duchesne River; northwesterly along this river to Highway US-40; west on US-40 to Duchesne (excluding all Ute Tribal lands).

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	102,649	16
Bureau of Land Management	271,908	43
Private	137,347	21
State	35,151	5
Indian	92,173	14
TOTAL	639,228	100

ELK HERD UNIT 15 - ANTHRO (Continued)**HARVEST TREND SUMMARY**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Succe ss	Bull	Ant.
1992	45	15	100	28	43	96	15	30
1993	85	13	100	65	78	100	15	77
1994	90	14	100	66	80	88	14	75
1995	7	7	100	3	10	100	7	0
1996	55	11	100	62	73	100	11	44

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	315	399	51	37	39	25		30%
93-94	220	--	39	--	20	--		--
94-95	264	283	52	--	24	4		
95-96	224	--	56	--	19	--	3	--
96-97	-	968	-	47	-	22	-	50%

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #16

BITTER CREEK

Status: Range conditions have been less than optimal for over seven years. Elk survival is expected to be good and range conditions are expected to improve. Bull elk quality is good. The average age of bulls harvested in 1996 was 5 years old. In general, hunter distribution is good and hunter comments are positive. Antlerless harvest is recommended as additional recreational opportunity.

Management Objective: Provide an elk hunting experience of high quality defined by low hunter density, good probability of harvesting trophy class bulls and maintenance of good elk population density.

Strategies: Growing road development and OHV. use.
 -Cooperate with BLM and DSL&F in developing road and vehicular access management programs.

Aerial trend data and winter range identification. Trend data is difficult to obtain. Winter ranges and summer range relationships are largely speculative.
 -Develop regular schedule of flights to better define best survey periods. Radio collar elk to document ranges.

Overall range condition and trend is poor due to the drought and over grazing by livestock. Grazing reductions have occurred, however, livestock distribution in canyon bottoms, riparian areas, and on some winter ranges is still of concern.
 -With BLM and DSL&F develop improved riparian and grazing systems to protect soil, water quality, water table and range resources.

BOUNDARY DESCRIPTION

Uintah and Grand Counties - Boundary begins at the Junction of the Utah-Colorado state line and Interstate 70; then west on I-70 to the Green River; north along this river to Coal Creek drainage; east along this drainage to the summit and drainage divide of the Book Cliffs; southeast and north along this divide to the Steer Ridge Road; northwest on this road to the Uintah and Ouray Indian Reservation Boundary; north and west along this boundary to the Green River; north along this river to the White River; east along this river to the Utah-Colorado state line; south along this state line to I-70. EXCLUDING ALL INDIAN TRUST LANDS.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	1,481,150	79
Private	164,290	9
UDWR	5,120	1
State	216,960	12
TOTAL	1,867,520	

ELK HERD UNIT 16 - BITTER CREEK (Continued)**HARVEST TREND SUMMARY**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	93	63	95	27	90	97	63	30
1993	93	58	94	23	81	97	60	33
1994				29			71	33
1995				26			71	43
1996	72	66		12		92	72	17

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		MATURE BULLS/100 COW	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	185	989	47	34	17	27	10	
93-94	129	1204	34	--	20	--	10	--
94-95	152	--	47	--	25	--	11	--
95-96	285	--	29	--	15	--	11	--
96-97	--	1,779	--	40	--	45	--	27

PELLET GROUP TREND

TRANSECT (Elevation)	93-94	94-95	95-96	96-97
Indian Ridge	--		3	6
Wood Canyon	--		6	--
Agency Draw	--		0	--
Lower McCook(Out)	42		9	97
Lower McCook (In)	33		0	86
Broome Canyon	--		3	--
Winter Ridge (Out)	--		--	--
Winter Ridge (In)	--		--	--
Big Park (In)	84		0	1
Big Park (Out)	26		0	0
W Frk Brewer Canyon	18		3	0

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #17

LITTLE CREEK

- Status:** Range conditions are improving. Riparian gulleys are healing in with grasses and some willow growth is evident. Upland areas are in improving condition. The average age of harvested bulls is seven years. DWR range condition trend studies were established in 1990. Utilization studies and photo points are also established.
- Objective:** Provide an elk hunting experience of high quality defined by low hunter density, reasonable probability of harvesting trophy class bulls and maintenance of good elk population density.
- Strategies:** Aerial trend data and winter range identification. Trend data is difficult to obtain and winter range is largely speculative.
- Continue summer helicopter surveys once every three years.
 - Continue management telemetry studies to define winter ranges for summer elk populations.
- Range condition and trend.
- Continue standard interagency range trend and condition plots.
 - Prescribe burn spruce-fir encroachment in aspen vegetation types.
- Riparian system management. Riparian systems are improving.
- With BLM and DSL&F develop improved riparian and grazing systems to protect soil, water quality and range resources.
 - Continue green line and range monitoring studies.
- Trespass BLM livestock use continues to be a problem in the upper part of West Willow Creek.

BOUNDARY DESCRIPTION

Grand County - Boundary begins at Ten Mile Knoll; then southwest along Diamond Ridge and the Book Cliffs summit (north-south drainage divide) to the Uintah and Ouray Indian Reservation boundary (Hells Hole/head of Sego Canyon); then north along the Indian Reservation boundary (west side of West Willow Creek) to Steer Ridge; southeast on the Steer Ridge Road to Ten Mile Knoll. EXCLUDING ALL INDIAN TRUST LANDS.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	3,200	6
UDWR	7035	12
State	46,720	82
TOTAL	56,955	100

ELK HERD UNIT 17 - LITTLE CREEK (continued)**HARVEST TREND SUMMARY**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	60	30	100	30	60	100	33	32
1993	75	30	100	30	60	91	33	44
1994				21			33	24
1995	50	35	100	10	45	92	38	12
1996	42	42		0	42	100	42	0

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		MATURE BULL/100 COW	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
*91-92	564	564	36	--	27	--	23	--
**92-93	61	--	55	--	218	--	209	--
93-94	283	--	25	--	28	--	--	--
94-95	285	--	34	--	19	--	7	--
95-96	--	--	--	--	--	--	--	--

*summer helicopter survey

**small sample size

ELK HERD UNIT #18

TIMPANOGOS

Status: This elk population exceeds the target population objective by a considerable amount. Generous numbers of antlerless elk permits for 1997 should help reduce herd size. Winter range is very limited in Salt Lake county and during a severe winter is almost nonexistent. The current status of this unit as an "any bull" hunting unit effectively prevents achievement of the herd composition objectives. This unit will be combined into the "Wasatch Mountains" Wildlife Management Unit in 1998 and will be recommended as a "spike or yearling bull only" area.

Objective: Maintain the elk population at a level consistent with available winter range and provide a variety of intrinsic and recreational experiences including regulated hunting and viewing by the public. The management plan seeks to maintain a wintering population of approximately 650 elk, as measured by aerial trend count, of which no more than 175 will winter in Salt Lake county.

Achieve an observed postseason sex ratio of 8 bulls/100 cows and an included ratio of 4 mature bulls/100 cows.

Problems & Strategies:

Loss of habitat.

- Encourage county planners and private developers to minimize development above 6,500 feet elevation.
- cooperate with and encourage the U.S. Forest Service to carry out needed range improvement projects.

Hunter access and safety concerns in Salt Lake County.

- Extended either sex archery seasons for deer and elk.

Population and depredation control, minimize deer/auto accidents.

- Continue to manage as an open "any bull" hunting unit.
- Use antlerless control and/or depredation hunts as needed.

Unsatisfactory harvest data from the "archery only" area.

- Devise a system whereby archers desiring to hunt this area may register by phone or pick up a "permit" free of charge at a DWR office.

BOUNDARY DESCRIPTION

Salt Lake, Summit, Wasatch and Utah counties - Boundary begins at the junction of Highways SR-52 and I-15 in Orem; then northerly on I-15 to Highway I-80; easterly on I-80 to Highway US-40; southerly on US-40 to Highway US-189; southwesterly on US-189 to SR-52; westerly on SR-52 to I-15.

RANGE AREA AND APPROXIMATE OWNERSHIP BY ACRES

Ownership	Summer Range	Winter Range	Total Acres	Percent
US Forest Service	56,536	55,229	111,765	47
Bureau of Land Management	233	1,085	1,318	1
State of Utah	1,779	974	2,753	1
Private	34,081	52,349	86,794	37
Other	7,696	23,349	31,045	13
Total	100,325	133,350	233,675	100

ELK HERD UNIT #18 - TIMPANOGOS (Continued)**HARVEST TREND SUMMARY**

Year	Hunters Afield	HARVEST				% Success	PERMITS ISSUED	
		Bulls	% Mature Bulls	Antlerless	Total		Bull	Antlerless
1993**	287	44	unk.	0	43	15	general	general
	33	0	unk.	29	29	88	--	33
1994**	514	48	unk.	0	48	9	general	general
1995**	310	44	unk.		44	14	general	general
	236	19	unk.	7	26	11	archery	archery
	16			5	5	33	--	16
1996**	754	116	unk.		116	15	general	general
	205	12	unk.	15	27	13	archery	archery
	33	3	unk.	7	10	30	muzzelldr.	muzzelldr.
	22			17	17	78	--	22

**bull harvest from that part of unit open to rifle hunting. Salt Lake county archery only/hunters choice area not specifically surveyed.

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		MATURE BULLS/100 COWS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
93-94	111	--	37	--	7	--	4	--
94-95	127	351	58	uncl.	9	uncl.	6	uncl.
95-96	210	--	32	--	15	--	2	--
96-97	383	853	44	57	14	5	3	1

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #19

HEASTON

Status: Major management progress was made during the 1996-97 period with the establishment of the Heaston East Cooperative Wildlife Management Unit (CWMU) and a successful trapping effort in Little Valley which removed 268 antlerless elk. Hopefully, additional trapping efforts and improved hunting access will enable us to bring the North Heaston subpopulation into compliance with the Elk Management Plan by the end of 1998.

Objective: Achieve a target population size of 250 wintering elk north of Butterfield and Middle canyons and 300 south of those roads. Reevaluate this population in 1999 to determine if the management plan objective is being met. Population will be monitored by aerial counts, computer modeling and winter/spring trend counts.

Achieve objective # 1 by redistribution of elk from the north end to the south. Utilize hunting and winter trapping as the primary means to accomplish the objective.

Problems & Strategies:

Limited hunter access:

-Work with private landowners to cooperate with sportsmen and DWR in allowing controlled access during hunting season. Landowner permits and/or Big Game Posted Hunting Units are potential options. UDWR has recently concluded a conservation easement on the ARCO property in Tooele county.

Agricultural damage

-assist landowners in the improvement of native range conditions so as to encourage elk to stay higher on the mountains.

-Encourage KUC to reduce the number of acres leased for grain fields above their slurry line and plant with a mixture of quality grasses, forbs, and browse. Seek RMEF funding for projects of this nature.

-Trap and relocate elk to the southern portion of unit in furtherance of management plan objectives.

BOUNDARY DESCRIPTION

Salt Lake, Utah and Tooele counties - Boundary begins at the junction of Highways I-15 and I-80; then southerly on I-15 to Highway SR-73; westerly on SR-73 to Highway SR-36; northerly on SR-36 to I-80; easterly on I-80 to I-15.

Table 1. Range Area and Approximate Ownership in Acres*

Ownership	Summer Range	Winter Range	Total Acres	Percent
US Forest Service	0	0	0	0
Bureau of Land Management	23,936	32,896	56,832	35
State Lands	7,800	9,680	17,480	10
Private Lands**	55,496	36,032	91,528	54
Other	460	2,020	2,480	1
Total	87,692	80,628	168,320	100

* source is 1973 Big Game Range Inventory Report. UDWR Publ. no. 74-16.

** includes 23,160 acres owned by Kennecott Utah Copper.

ELK HERD UNIT 19 - HEASTON (continued)**HARVEST TREND SUMMARY**

Year	HARVEST						PERMITS ISSUED	
	Hunters Afield	Bulls	% Mature Bulls	Antlerless	Total	% Success	Bull	Antlerless
1992	49	47	100	0	47	96	49	--
	155	0	0	150	150	97	--	159
1993	56	46	100	0	46	82	56*	--
	10	10	100		10	100	10*	36
	36			22			--	48
	46			2	2	4	--	48
	31			22	22	72	--	36
	36			35	35	97	--	36
	54			35	35	64	--	60
1994	55	51	98	0	51	93	55	--
	7	6	83	0	6	86	7*	--
	5	5	100	0	5	100	5	--
	5	5	100	0	5	100	5*	--
	54			39	39	72		55
1995	70	59	98	0	59	84	80*	--
	32			14	14	45	--	33
1996	22	17	93	0	17	78	22	--
	22	18	100	0	18	81	22	--
	11	10	80	0	10	91	11	--
	17**	--	--	0	--	--	17	--

* includes landowner permits

** harvest results from landowner permits unknown in 1996.

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		MATURE BULLS/100 COWS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
91-92	283	617	53	*	46	34**	--	120***
92-93	182	624	41	*	42	39**	38***	126***
93-94	--		--		--		--	
94-95	--	--	--	--	--	--	--	--
95-96	424	605	39	37	18	45	21***	123***
96-97	--	268	--	49	--	--	--	--

* Unclassified

** Bulls/100 antlerless

*** Indicates the actual number of mature bulls seen.

* * * **MANAGEMENT PLAN SYNOPSIS** * * *

ELK HERD UNIT #20

DEEP CREEK

Status: This herd is now very close to the existing management objective. This management plan, however, must be revised in 1998. With the recent expansion of the Goshute Indian Reservation, the bulk of the elk population will be restricted to the reservation yearlong. Rumors are that the tribe is developing their own management plan and are being assisted by the U.S Fish & Wildlife Service. A much smaller population on non indian Utah lands will mandate fewer public permits in the future and greater difficulty in dealing with depredation complaints in the Ibapah area when elk leave the reservation in winter.

Objective: The management plan seeks to achieve an interim population of 500 wintering elk on the Deep Creek Mountains irrespective of the political classification of the area where they are found.

Problems &

Strategies: Manage as a limited entry hunting unit and provide a high level of hunter success for mature bulls:

-Continuously monitor the elk population by cooperative aerial counts, classification surveys and use of a computer population simulation model.

Habitat information with respect to elk and their use of habitat is lacking. The BLM to date has not factored in the presence of elk on the mountain into their planning process.

-New range condition and trend studies have been established on elk wintering areas but more are needed, especially on the reservation. DWR will be assisting the Goshute Tribe as requested in preparation of a management plan and will seek to establish more studies there. The Nevada Department of Wildlife is also involved in cooperative efforts.

-The BLM will be encouraged to formally include elk in their planning process and to allocate forage for them. To date only 128 AUM's in Scotts Basin have been allocated.

Crop Depredation:

-Problems of limited scope have occurred in the Goshute-Ibapah area in winter. All available methods to prevent depredation will be employed including antlerless control or depredation hunts, fencing, and cooperative efforts with the Goshute Tribe.

BOUNDARY DESCRIPTION

Tooele and Juab counties - Boundary begins at the Pleasant Valley road and the Utah-Nevada state line; then northerly along this state line to the Salt Springs (Blue Lake) road; southerly on this road to the Pleasant Valley road; northwesterly on this road to the Utah-Nevada state line.

Range Area and Approximate Ownership In Acres*

Land Ownership	Summer Range	Winter Range	Total	Percent
Bureau of Land Mgmt.	33,977	119,520	153,497	77
Goshute Reservation	10,026	10,520	20,106	10
State of Utah	7,241	14,400	21,640	11
Private	4,456	500	4,956	2
Total	55,700	144,000	199,700	100

* Source is 1989 Big Game Range Trend Studies, UDWR publication 92-12.

ELK HERD UNIT 20 - DEEP CREEK (Continued)**HARVEST TREND SUMMARY**

Year	HARVEST						PERMITS ISSUED	
	Hunters Afield	Bulls	% Mature Bulls	Antlerless	Total	% Success	Bull	Ant.
1993	5	5	80	0	5	100	5	--
	6	6	83	0	6	100	6**	--
1994	5	4	100	0	4	80	5	--
	7	0		4	4	57	--	7*
	--	--	--	--	--	--	--	--**
1995	7	6	100		6	86	7	--
	9			6	6	67	--	9***
	8	8	100		8	100	8**	--
	?			?	?	?	--	60**
1996	11	7	100		7	67	11	--
	34	--	--	12	12	35	--	36***
	8	8	100	--	8	100	8**	--
	25	--	--	25	25	100	--	25**

* Depredation Hunter Pool and/or Direct Landowner permits

** Goshute Indian Tribal permits (includes marketed permits)

*** Depredation Hunter Pool and/or Direct Landowner permits included with public permits.

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		MATURE BULLS/100 Cows	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	--	119	--	74	--	9	--	0
93-94	46	82	35	35	42	15	12	7
94-95	153	--	51	--	21	--	8	--
95-96	166	429	38	39	23	37	8	23
96-97	182	--	60	--	17	--	10	--

ELK HERD UNIT # 21

DIAMOND FORK

Status: Hunter participation and spike bull harvest both increased slightly in 1996 and the number, size and age of branch antlered bulls continues to increase. Overall population size increased dramatically and has led to a record number of antlerless permits (> 900) for the 1997 season. The current population exceeds the management objective. Range condition remains satisfactory but the ecological changes taking place on much of the winter range continue. The Wallsburg WMA was rested from livestock use in 1997 and there should be abundant forage for the wintering elk and deer population.

Objective: The management plan seeks to maintain a wintering population of 1,500 elk, as measured by aerial trend count.

Achieve a postseason ratio of 8 bulls/100 cows and 4 mature bulls/100 cows.

Offer limited numbers of "any bull" permits to the public consistent with achieving the bull/cow ratio objectives.

Problems & Strategies:

- < Agricultural depredation and rang condition concerns on USFS winter ranges.
 - Continue post season antlerless control hunts to achieve target wintering population specified in elk management plan.
- < Impacts of elk management on other resource values.
 - Limit wintering elk numbers on the Springville-Mapleton face.
 - Reassess livestock use on DWR range.
- < High hunter densities.
 - Divide antlerless hunts into smaller segments
 - Post season antlerless hunts to lessen numbers during regular season.
 - Implement "spike bull only" hunt strategy.
 - Cap elk hunter numbers to stop increasing pressure.
 - Utilize seasonal or permanent road closures.
- < Excessive yearling bull harvest and suspected illegal harvest of branch antlered bulls.
 - Implement a "spike bull only" regulation to improve yearling bull recruitment.
 - Request that a "law enforcement action plan" be prepared to address perceived illegal harvest problems.

BOUNDARY DESCRIPTION

Utah and Wasatch counties - Boundary begins at the junction of Highways I-15 and US-6 at Spanish Fork; then easterly on US-6 to the Right Fork of the White River road near Soldier Summit; northeasterly on this road to the Reservation Ridge road; northerly on this road to Big Beaver Spring road; northerly on this road to Big Beaver Spring and Beaver Canyon drainage; northerly along this drainage to the Strawberry River; westerly along this river to the Soldier Creek Dam road; northerly on this road to Highway US-40; northwesterly on US-40 to Highway US-189; southwestwesterly on US-189 to Highway SR-52; westerly on SR-52 to I-15; southerly on I-15 to US-6.

Table 1. Range Area and Approximate Ownership by Acres

Ownership	Summer Range	Winter Range	Total Acres	Percent
US Forest Service	223,389	131,581	354,970	71
Bureau of Land Mngt.		1,918	1,918	1
State Lands	582	5,573	6,155	1
Private Lands	51,495	79,291	130,786	26*
Other	3,183	295	3,478	1
Total	278,649	218,658	497,307	100

ELK HERD UNIT 21 - DIAMOND FORK (continued)**HARVEST TREND SUMMARY**

Year	HARVEST						PERMITS ISSUED	
	Hunters Afield	Bulls	% Mature Bulls	Antlerless	Total	% Success	Bull	Antlerless
1992	3,199 97	539	0	82	539 82	17 85	general --	general 99
1993	2,163 381 110	278	0	227 59	278 227 59	13 60 54	general -- --	general 385 110
1994	2,574 297 ?	332 15	0 87	265 7	332 265 22	13 89 --	general -- illegal	general 305 illegal
1995	1,181 11 249	159 9	0 100	104	159 9 104	13 82 42	general 11* --	general -- 249
1996	1,324 424 43 15 30 99 ? 2	212 35 10 11 5	0 0 0 100 80	46 13 22 77 2 4	212 81 23 11 22 77 7 4	16 19 54 73 71 77 -- 100	-- archery muzzeldr. 15 -- -- illegal --	-- archery muzzeldr. .br/>-- 33 100 illegal mitigation

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		MATURE BULLS/100 COWS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	326	1984**	55	38	21	5	15	29
93-94	434	--	46	--	10	--	4	--
94-95	1277	1490**	53	57	16	9	4	7
95-96	387	--	52	--	22	--	5	--
96-97	426	2018**	49	59	22	24	5	14

**Helicopter count

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #22

NEBO

Status: An aerial census conducted during the winter of 1996-97 revealed 1154 elk on the North Nebo, 170 on the South Nebo and 38 on the West Nebo. This figure is within the management objective for the entire unit but exceeds the target on the North Nebo. To reduce this subpopulation, 400 regular season antlerless permits have been issued for 1997. The bull/cow ratio and the age structure of the bull population continues to improve to a point where we now have 11 bulls/100 cows and 3 mature bulls/100 cows after the hunting season has closed.

Objective: Achieve a wintering elk population capable of producing an aerial trend count of 1,000 on the North Nebo portion of the unit by 1997. Seek to achieve an elk population of 400 on the South Nebo portion and the previously mentioned 154 elk on the Yuba-Dog Valley part.

Achieve postseason ratios of 8 bulls/100 cows and 4 mature bulls/100 cows.

Problems & Strategies:

Agricultural depredation.

-Remove depredating animals through selective antlerless hunting and trapping.

-Remove, if possible, elk residing year round in Juab valley.

Winter range, especially on west side is limited in extent by highway development and agriculture etc.. Wildfires and past overgrazing have reduced productivity in selected areas also.

-Acquisition of critical winter range parcels, rehabilitation of depleted rangelands to include cooperative projects with private owners on their land.

Excessive yearling bull harvest and suspected illegal harvest of branch antlered bulls.

- Implement a "spike bull only" regulation to improve yearling bull recruitment.

- Request that a "law enforcement action plan" be prepared to address perceived illegal harvest problems.

BOUNDARY DESCRIPTION

Utah, Juab, Millard and Sanpete counties - Boundary begins at the junction of Highways I-15 and US-6 at Spanish Fork; then southeasterly on US-6 to Highway US-89 at Thistle Junction; southerly on US-89 to Gunnison and the Sevier River; northwesterly along the Sevier River to Highway SR-132; westerly on SR-132 to US-6; northerly on US-6 to Santaquin and I-15; northerly on I-15 to US-6 at Spanish Fork.

Range Area and Approximate Ownership by Acres

Ownership	Summer Range	WinterRange	Total	Percent
US Forest Service	116485	67045	183530	22
Bureau of Land Mgt.	1181	246531	247712	30
State Lands	300	39980	40280	5
Private Lands	24413	306181	330594	39
Utah Div. Wildl. Res.	7631	24830	32461	4
Total	150010	684567	834577	100

ELK HERD UNIT #22 - NEBO (Continued)**HARVEST TREND SUMMARY**

Year	HARVEST						PERMITS ISSUED	
	Hunters Afield	Bulls	% Mature Bulls	Antlerless	Total	% Success	Bull	Antlerless
1992	1,253 174	150	0	81	150 81	12 47	general	general 177
1993	940 188	83	0	125	83 125	9 66	general --	general 192
1994	1,134 21	171 3	0 67	17	171 20	15	general --	general 21
1995	661 272	84	0	148	84 148	13 54	general --	general 279
1996	1,199 414 43 5 137 55 18	180 19 3 5	0 0 0 100	43 14 70 35 8	180 62 17 5 70 35 8	15 15 39 100 51 64 44	general archery muzzelldr. 5 -- -- --	general archery muzzelldr. -- 138 55 mitigation

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/100 COWS		MATURE BULLS/100 COWS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	319	831**	52	*	12	2	9	9
93-94	874	--	35	*	14	--	*	--
94-95	862	1148**	55	40	18	*	4	*
95-96	490	--	46	--	18	--	5	--
96-97	879	1362	66	48	22	11	3	3

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #23

MANTI

Status: The Manti elk herd is well established and use areas are well known and documented. The management plan was completed in 1994. The major objective is to stabilize harvest at 1,300 yearling bulls. This implies a post season herd size of 11,000 elk. No obvious winter range condition problems are apparent in Utah or Sanpete counties.

Objective: Stabilize herd at a level which will provide an annual general season harvest of 1,300 yearling bulls.

Increase the number of older age class bulls in the herd while continuing to provide open hunting for yearling bulls.

Monitor conditions and trend of the range.

Maintain and improve elk habitat.

Problems & Strategies:

Elk use is not equally distributed across the unit. Some areas are showing a downward trend in range conditions.

- Initiate cooperative habitat improvement projects.

- Utilize antlerless hunts to remove elk from specific areas where capacity is reached.

Depredation may occur.

- Seek permanent solutions to depredation problems.

- Attempt to schedule antlerless permits during post season near the problem areas.

The harvest of mature bulls must be limited in order to increase the number of older age class bulls in the herd.

- Recommend hunting strategies to limit the harvest of mature bulls while providing open hunting for yearling bulls.

Illegal harvest of bulls may not allow for a significant increase in older age class bulls.

- Support Law Enforcement efforts and programs which will limit illegal harvest.

Increased hunter pressure on yearling bulls may result in few bulls being recruited to older age class.

- Recommend measures to reduce pressure during open bull season, if necessary.

- Pursue options of seasonal access management to distribute hunter pressure.

High use areas need to be defined and monitored. Methods need to be agreed upon to monitor range conditions.

- Continue studies to define and monitor high use areas.

Habitat loss to development, natural succession, etc.

- Coordinate development projects and mitigate impacts.

- Initiate coop habitat improvement projects.

- Coordinate access management with local government and land managers.

ELK HERD UNIT 23 - MANTI (continued)**BOUNDARY DESCRIPTION**

Utah, Sanpete, Carbon, Emery and Sevier counties - Boundary begins at the junction of Highways US-89 and US-6 near Thistle; then east on US-6 to SR-10; south on SR-10 to Quitchupah Creek; northwest along this creek to the Manti-La Sal National Forest boundary; west along this boundary to the Sanpete-Sevier County line; west along this county line to US-89; north on US-89 to US-6.

RANGE AREA AND APPROXIMATE OWNERSHIP*

Ownership	Area (acres)	%
Bureau of Land Management	181,760	14
Private	351,360	26
State	54,400	4
Forest Service	748,800	56
TOTAL	1,336,320	100

HARVEST SUMMARY

		Harvest					Permits		
Year	Hunter s Afield	Buck	% mature bulls	Ant .	Total	% Succ.	Bull	HC	Ant
1992	9145	1304	--	610	1914	21	16	--	823
1993	9871	964	--	936	1900	19	33		1673
1994	7497	1050	--	865	--	--	33		1260
1995									
1996	5775	744	--	842			55		990

CLASSIFICATION DATA

Sample Size			Calves/ 100 Cows		Bulls/ 100 Cows		Mature Bulls	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	1625	--	47	--	14	--		--
93-94	2289	7265	46	33	11	6		4
94-95	1842		58	--	13	--		
95-96	1219	7932	43	32	18	10		5
96-97	2270		62		12			

ELK HERD UNIT 23 - MANTI (continued)**PELLET GROUP TREND**

TRANSECT (ELEVATION)	92-93	93-94	94-95	95-96	96-97
Indianola (6300)					
Muddy Creek (6500)	32	2	77	3	118
Lassen Draw (6600)					
Dairy Fork (6700)		85			
Black Dragon (7200)	15	16	42	49	50
Game Range Project (7400)	22	28	80	28	37
Starvation (7500)		20			
Dry Mtn. (7800)	0	2	8	0	0
Hole Trail (7800)	19	0	--	0	34
Biddlecomb Ridge (8000)	3	29	17	35	21
Elk Knolls (8400)	55	72	36	26	31
So. Trail Mtn. (8500)	97	68	97	60	69
South Horn (8600)	28	35	33	25	25
Wildcat Knolls (8700)	28	52	36	48	
Sage Flat (8900)	29	23	39	52	
Quitcupah (9000)	25	34	16	12	
Lake Fork		60			
Mahogany Point (9000)	7	10	15	18	
North Horn (9000)	45	39	66	15	
Reynolds Pt. (9000)	57	3	35	0	
So. Trail Res (9100)	63	54	57	63	
Birch Creek Chaining	75	18		5	
Bald Mountain		15			
Pigeon Creek					
Mayfield Face					
Pole Canyon (Cemo)					
South Mayfield Face					
South Hollow	--				
Pole Canyon	--				
Pines Knoll	61	81	58	72	61
So. Trail Terrace	32	46	80	90	17
Stump Flat	32	35	52	26	27
Porphyry Reseed	9	3	6	0	22
Wiregrass Bench	95	37	55	8	49
Long Bench	8	8	12	32	37
Cedar Bench	28		71	88	35
Horse Bench	134		192	186	128
Telephone Bench	53	40	126	103	106
AVERAGE					

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #24

RANGE CREEK

Status: A management plan was approved in May 1993. West of Soldier Creek Road: A helicopter survey in January 1994 revealed elk numbers surpass the management plan objectives of 400-500 wintering elk. East of Soldier Creek Road: Elk numbers are growing and new use areas are being established. The herd is approaching the management plan objective of 800 elk. Elk sightings in 9-mile Canyon are increasing and depredation may occur.

Objective: West of Soldier Creek Road: reduce wintering elk numbers to 400-500 elk. East of Soldier Creek Road: stabilize herd size at a maximum winter count of 800 elk.

Problems &

Strategies:

Depredation

-Address depredation according to DWR policy.

Immigration of elk from the Diamond Fork herd to the Range Creek Unit wintering grounds.

-Recommend antlerless permits after immigration.

BOUNDARY DESCRIPTION

Carbon, Duchesne, Emery, Uintah, Utah and Wasatch counties - Boundary begins at Soldier Summit and Highway US-6; then southeast on this highway to I-70; east on I-70 to the Green River; north on this river to Nine Mile Creek; west on this creek to the Argyle Canyon road; west on this road to the Right Fork of White River road; southwest on this road to US-6.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Public	51,552	31
Private	112,132	69
TOTAL	163,684	100

HARVEST TREND SUMMARY

East of Soldier Creek Road

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992	22	19	92	--	19	86	22*	
1993	30	28	100	--	28	93	30*	--
1994	31	28	100	--	28	90	32*	
1995								
1996	46	41		5	46	100		

*50% landowner permits

ELK HERD UNIT 24 - RANGE CREEK (Continued)**CLASSIFICATION SUMMARY
East of Soldier Creek Road**

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	194	--	44		10		--	
93-94	259	487	42	25	16	27	6	8
94-95	--	--	--	--	--	--	--	--
95-96	--	635	--	37	--	34	--	22
96-97	95	--	48	--	24	--	3	--

**HARVEST TREND SUMMARY
West of Soldier Creek Road**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
*1992	660	104	80	67	171	26	0	160
**1993	678	127	--	95	220	32	0	110
1994	750	128	--	147	275	37	0	220
1995								
1996	381	37	--	50	87	23	--	44

*old Minnie Maud Unit **addition of South Avintaquin to Unit

**CLASSIFICATION SUMMARY
West of Soldier Creek Road**

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
91-92	--	587	--	33	--	20	--	8
92-93	--	--	--	--	--	--	--	--
93-94	--	626	--	21	--	1	--	0
94-95	--	--	--	--	--	--	--	--
95-96	--	327	--	29	--	6	--	0

PELLET GROUP TREND

TRANSECT (Elevation)	92-93	93-94	94-95	95-96	96-97
Cedar Ridge 1	6	8	8	5	7
Prickly Pear	--	23	--	--	77
Twin Hollow	32	49	49	57	66
Steer Ridge	--	23	34	17	77

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #25

BUCKHORN

Status: This unit was not counted in 93-94, however, it is expected that the population is remaining stable due to antlerless removal and low production. Range conditions are poor to fair on the unit.

Objective: Maintain herd at current level of 80-100 elk. Manage for mature bull elk.

Problems &

Strategies: Establish studies to delineate elk use areas and relative use levels.
-Seek ways to develop water sources on public land to encourage more elk use there and less on private land.

BOUNDARY DESCRIPTION

Carbon and Emery counties - Boundary begins at Price and Highway US-6; then south on US-6 to Interstate 70; west on I-70 to the San Rafael River; west along this river to Cottonwood Creek; west along this creek to Highway SR-10; north on SR-10 to Price.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
BLM	41,800	80
State	5,600	11
Private	4,800	9
*TOTAL	52,200	

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1993	7	2	100	5	7	100	2	5
1994	8	2	100	6	8	100	2	6
1995								
1996	12	2		5	7	58		

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93		56		33		33		9(69%)
93-94	--	--	--	--	--	--	--	--
94-95	--	--	--	--	--	--	--	--

95-96	--	48	--	45	--	36	--	15
96-97	--	--	--	--	--	--	--	--

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

ELK HERD UNIT #26

MOAB

Status: A new management plan has been written and is being implemented. The herd objective has been met and additional antlerless permits will be issued to stabilize herd growth. Hunter pressure and bull harvest continues to increase, but hunter success has declined. Elk ranges are generally in good condition.

Management

Objective: Maintain a wintering population of 1,800 elk on the Utah and Colorado portions of the LaSal Mountains.

Improve the percent of mature bulls in the herd while maintaining opportunities to harvest bull elk.

Monitor condition and trend of range.

Maintain and improve elk habitat.

Strategies:

The elk herd will reach capacity in some areas sooner than others.

-Intensively monitor range conditions in specific use areas.

-Utilize antlerless hunts to remove elk from specific areas where capacity is reached.

Increased hunter pressure may reduce success rates and mature bulls in the harvest.

-Recommend harvest and management strategies which will maintain or improve mature bull harvest.

Private landowners and state lands may not tolerate increased numbers.

-Pursue programs which will provide incentives for increased elk numbers.

Habitat may be lost to development, natural succession or excessive utilization of forage.

-Coordinate development activities and mitigate impacts.

-Continue cooperative habitat improvement projects.

BOUNDARY DESCRIPTION

Grand and San Juan counties - Boundary begins at Highway US-191 and the Colorado River; then south along this river to Kane Springs Wash; south along this wash to Hatch Wash; south along this wash to US-191; south on US-191 to the Big Indian road; east on this road to the Lisbon Valley road; southeast on this road to the Island Mesa road; east on this road to the Utah-Colorado state line; north along this line to the Dolores River; west along this river to the Colorado River; south along this river to US-191.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	168,320	41
Bureau of Land Management	150,400	36
Private	51,200	12
State	46,080	11
TOTAL	416,000	

ELK HERD UNIT 26 - MOAB (continued)**HARVEST TREND SUMMARY**

		HARVEST					CONTROL PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1993	1174	171		135	306	26		193
1994	1237	241		65	306	25		
1995								
1996	1434	176		284	460	32		375

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
90-91	576	1012	51		17			
91-92	669	1231	51		16			
92-93	762	*1459	47	27	18	9		1
93-94	678		51		11		2	
94-95	752	1772	45	35	14	6	1	1
95-96	769		49		15		1	

*Helicopter

PELLET GROUP TREND

TRANSECT (Elevation)	92-93	93-94	94-95	95-96	96-97
Polar-Under-Rim (6,300)	123	29	102	31	60
Amasa's Back (6,900)	14	12	34	10	40
Carpenter Flats (6,900)	35	25	45	40	37
Slaughter Flat (7,100)	73	129	131	51	94
Lower Two Mile (7,300)	34	14	71	37	28
Lackey Fan (7,400)		54	105	42	102
Jimmy Keen Flat (7,700)	35	32	72	32	25
North Beaver Mesa (7,800)	38	32	65	34	47
AVERAGE	48	41	78	35	44

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

ELK HERD UNIT #27

DOLORES TRIANGLE

Status: Range conditions are good. Ryan Creek burn reseed has responded well. The total herd is estimated at 1700 animals with around 50% of this number spending some portion of the winter in Utah. In 1994-95 winter, 405 elk were counted in Utah.

Management Objective: Manage this interstate elk herd for an optimum population consistent with the health of the range resource and consistent with Colorado's management goals.

Strategies: Range conflicts.

- Monitor range conditions on critical elk winter ranges.

Harvest strategies.

- Monitor success and attitudes of limited hunters on the long late "trophy bull" season.
- Monitor elk use habitat and use areas to warrant an increase in harvest opportunities.
- Work closely with Colorado DOW to ensure management objectives for both states are met

BOUNDARY DESCRIPTION

Grand County - Boundary begins at the Colorado River and the Utah-Colorado state line; then southwest along this river to the Dolores River; east along this river to the state line; north along this state line to the Colorado River.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	202,300	84
Private	8,700	4
State	28,500	12
TOTAL	239,500	

ELK HERD UNIT 27 - DOLORES TRIANGLE**HARVEST SUMMARY**

		HARVEST					CONTROL PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1991	NO HUNT							
1992	NO HUNT							
1993	3	3	100			100		
1994	3	3	100			100		
1995	3							
1996	3							

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
93-94								
94-95		408		40		73		31
95-96	no	data						
96-97		890*		58		43		24

*includes Colorado

PELLET GROUP TREND

TRANSECT (Elevation)	92-93	93-94	94-95	95-96	96-97
Granite Park (6,400)	66	28	75	26	29
Ryan Park, Utah (6,400)	58	18	66	20	58
Ryan Park, Colo. (6,600)	17	12	46	14	
Steamboat Mesa (6,700)	8	6	9	2	5
AVERAGE	37	64	49	16	

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #28

SAN JUAN

Status: Established as a new herd unit in 1989 after a supplemental transplant of 150 elk. The elk herd is increasing and new use areas are being established. Sufficient mature bulls are available to allow limited harvest on limited entry portion of unit. Bull harvest closed east of US-191 due to over harvest of bulls migrating from limited entry portions during general bull season.

Objective: Allow elk numbers to increase to a wintering population of 1000 elk during the next five years west of highway US-191. Management emphasis is on maintaining a diverse bull age structure and providing quality recreational opportunities. Stabilize the wintering elk herd east of highway US-191 at 200-250 elk.

Problems & Strategies:

Key use areas are not adequately identified and are continually being established at the herd grows and expands.

-Continue radio-telemetry monitoring to help identify key use areas.

-Conduct winter helicopter surveys biannually to determine winter use areas and herd trends.

-Expand range monitoring so new areas are established.

Interspecific competition from livestock may limit opportunities for herd expansion.

-Land management agencies should provide forage and habitat for elk in planning documents and management decisions.

-Design range improvements that will relieve interspecific competition.

Number of elk migrating from other units to West Summit area during winter is unknown.

-Continue radio telemetry monitoring to determine origin and numbers of elk migrating to West Summit from other units.

Private lands in West Summit area may return to crop production after CRP program ends.

-Utilize antlerless hunts to stabilize elk numbers at West Summit.

-Develop hunting strategies to encourage redistribution of elk from private to public lands.

-Encourage landowners to participate in programs which increase landowner tolerance of elk.

ELK HERD UNIT 28 - SAN JUAN (continued)**BOUNDARY DESCRIPTION**

San Juan County - Boundary begins at the confluence of the San Juan and Colorado Rivers; then north along the Colorado River to Kane Springs Wash; south along this wash to Hatch Wash; south along this wash to Highway US-191; south on US-191 to the Big Indian road; east on this road to the Lisbon Valley road; southeast on this road to the Island Mesa road; east on this road to the Utah-Colorado state line; south on this state line to the Navajo Indian Reservation boundary; west along this boundary to the San Juan River; west along this river to the Colorado River.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
TOTAL		

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1993	78	21		27	48	62	11	33
1994	97	54		18	72	74	11	33
1995								
1996	80	20		42				

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	210	361	56	--	27	--	--	--
93-94	396		57		24		6	
94-95	225	684	54	44	27	26	13	12
95-96	287		54		26		9	
96-97		773		31		43		26

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #29

OAK CREEK

Status: This is a young and static elk herd limited by water distribution and summer range. Herd is estimated at 20 elk.

Objective: Follow the elk management plan to increase the herd to 140 elk. Keep it in a limited entry hunt.

Problems & Strategies:

Lack of summer elk habitat.

-Work with the U.S. Forest Service to increase elk summer habitat through cooperative projects.

Depredation by elk.

-Monitor the population and forage use closely and apply depredation hunts in areas of need. Remove elk in depredation problem situations.

BOUNDARY DESCRIPTION

Juab and Millard counties - Boundary begins at Holden and Interstate 15; then northerly on I-15 to the Sevier River; northwesterly along this river to Highway SR-132; west on SR-132 to Highway US-6 at Lynndyl; south on US-6 to Highway SR-26; southeast on SR-26 to Holden.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Area (acres)
Forest Service	94,400	65
Bureau of Land Management	20,400	14
Private	24,500	17
State	3,800	3
TOTAL	143,100	

ELK HERD UNIT 29 - OAK CREEK (continued)**HARVEST TREND SUMMARY**

		HARVEST					CONTROL PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	10	9	78	--	9	90	(5)	--
DEP	52	3*	--	36	39	69	--	52
1993	--	--	--	--	--	--	--	--
1994	5 **9	2	100	**6	2	40		
1995	closed							
1996	closed							

*Illegally killed during depredation hunt.

** Landowner Permits

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
91-92	62	*	50	*	56	*	--	--
92-93	21	--	50	--	60	--	5	--
93-94	35	--	43	--	48	--	24	--
94-95								
95-96				NO	DATA			

*radio collared elk move off unit to South Nebo unit in winter

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #30

PAHVANT

Status: Winter 96 count was 625 elk.

Management

Objective: Continue to follow elk plan to meet management objectives of a balanced population of age class, cows, calves and bulls.

Strategies:

- * Lack of knowledge concerning elk summer and wintering areas.
- Continue telemetry study, aerial surveys and range rides; gather harvest.
- * Elk disturbance.
- Use road management, seasonal closures of roads.

BOUNDARY DESCRIPTION

Millard, Sevier and Juab counties - Boundary begins at the junction of Interstates 70 and 15; then north on I-15 to the Sevier River; southeasterly along this river (and the south shore of Yuba Reservoir) to I-70 near Salina; southerly and westerly on I-70 to I-15.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Area (acres)
Forest Service	327,300	46
Bureau of Land Management	137,100	19
Private	189,300	27
State	28,300	4
Wildlife Resources	24,800	4
TOTAL	706,800	

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992	38	16	94	16	32	84	16	22
1993	68	16		49	65	96	16	52
1994	38 *44	16	100	21 *27	37	97	16	22
1995	109	18	100				20	88
1996	109	14		60	74		21	88

* Landowner Permits

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	388	653	31	--	22	--	18	--
93-94		*						
94-95	167	--	40	--	18	--	18	--
95-96	237	625	47		21			

96-97	240		44		30	30		17
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*open winter no count done

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

ELK HERD UNIT #31

FISHLAKE

Status: This herd has been established since 1912. Elk have expanded to include all drainage on the Fish Lake Unit. Sportsmen and non-consumptive users alike are excited with the number of mature bulls they are now observing on this unit.

-Winter and summer range is generally in good condition for elk. But habitat decline is the critical problem. Opportunities to reverse this trend seem to be diminishing. Spring green-up is limited on spring range. Winter browse is becoming old, decadent, and disappearing. Throughout the unit the major concern is an encroaching pinyon pine and juniper forest. An additional concern is the encroachment of spruce-fir into the aspen areas.
-The 1996 computer model puts the elk herd under 4,000 animals, postseason.

Objective: Maintain a open yearling bull hunt. Maintain the preseason (September) limited any bull hunt. The herd objective of the elk management plan is to maintain a 5,000 head winter population. Until the landowners feel the Gooseberry depredation problem is under control, the herd will be held under 4,000 head.

Problems &

Strategies: Habitat decline. Depredation problems on agricultural lands. The most serious is in the Gooseberry Valley agricultural area.

- Cooperative interagency range enhancement projects to reverse trend and develop habitat for both elk and livestock.

BOUNDARY DESCRIPTION

Sevier and Wayne counties - Boundary begins at Highway US-89 and the Sanpete-Sevier county line; then easterly along this county line to its junction with the Fishlake-Manti-La Sal National Forest boundary; easterly along this forest boundary to its junction with Quitchupah Creek; southeasterly along this creek to Highway SR-10; southerly on SR-10 to the Sevier-Emery County line; south on this county line to Last Chance Creek; southeasterly along this creek to the Muddy Creek drainage; southeasterly along this drainage to Hanksville and Highway SR-24; westerly on SR-24 to Loa and the Long Hollow road; southwesterly on the Long Hollow road to Parker Lake and continuing to Dry Wash; southwesterly on the Dry Wash road to Antimony and Highway SR-22; northerly on SR-22 to Highway SR-62; northerly on SR-62 to Highway SR-24; northerly on SR-24 to US-89; north on US-89 to the Sanpete-Sevier County line.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	438,400	74
Bureau of Land Management	80,720	14
Private	57,600	10
State	10,880	2
TOTAL	587,600	

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992*	3,160	454	67	103	587	19	11	110
1993	3,712	796		98	796	21	16	110

1994	3,930 *73	629	3	65 *54	694	18	16	80
1995	2399	407		175	582			
1996	3188	695		170	865			220

* Landowner Permits

ELK HERD UNIT 31 - FISHLAKE (continued)

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	2,118	3,600	45		25		47	
93-94	1,872	3,447	31	--	24	--	48	71
94-95	663	--	45	--	18			
95-96	916	--	54	--	26	--	22	--
96-97	1725	5854	54		24	11	7	6

PELLET GROUP TREND

TRANSECT (Elevation)	92-93	93-94	94-95	95-96	96-97
Cedarless Flats	7	1	3	1	4
Triangle Mtn. (6,200)				6	30
Rocks (7,000)					10
Elk Camp (8,200)	26	18	30	22	26
Duncan Mtn. (8,200)					14
Old Women					9
Dog Flat	2	5	7	12	6
Rose Meadow				3	6
Black Mountain				3	12
Fallon Spring				4	6
Preator Slope	0	1	0	0	0
Polk Creek	2	3	1	3	2
Meeks Lake	4	2	2	2	4
Thousand Lake	0	0	4	0	0
Seven Mile Exclosure (new)	1	4	5	0	2
Sage Flat	0		7	0	3
AVERAGE			7	4	8

*Not read because of reseeding.

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #32

MONROE MOUNTAIN

Status: Elk herd is increasing. A good population of branched antler bulls.

Management

Objective: Maintain a huntable population of mature bull elk. Consider antlerless elk hunt as method to dispense elk and reduce livestock elk conflicts.

Strategies: Telemetry study to identify use and movement.
-Continue aerial surveys, harvest surveys, and document sightings.

Elk move on and off unit to adjacent units.
-Use telemetry to record elk movement.

BOUNDARY DESCRIPTION

Piute and Sevier counties - Boundary begins at Sigurd and Highway SR-24; then southerly on SR-24 to its junction with Highway SR-62; southerly and west on SR-62 to Highway US-89; north on US-89 to Sigurd.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Area (acres)
Forest Service	206,900	65
Bureau of Land Management	82,800	26
Private	6,000	2
State	22,400	7
Wildlife Resources	300	
Indian	400	
TOTAL	318,800	

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1993	49	20		23	43	89	22	27
1994	38 *2	16	100	15 *0	31	82	16	22
1995	56			14				
1996		23					27	

* Landowner Permits

ELK HERD UNIT #32 - MONROE MOUNTAIN**CLASSIFICATION SUMMARY**

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	166	609	46	--	17		13	
93-94	537	798	33	--		--		--
94-95	964	--	55	--	18	--		
95-96	895	--	45	--	17	--		
96-97								

PELLET GROUP TREND

TRANSECT (Elevation)	92-93	93-94	94-95	95-96	96-97
Little Table					10
Washburn Reservoir					12
AVERAGE					11

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #33

BEAVER

Status: The range is in good condition for elk. Long term trend population unknown.

Management

Objective: To allow elk numbers to increase and maintain range at present level or improving condition.

Strategies:

Elk distribution.

-Continue open bull hunting to pressure elk to new range.

Elk depredation in south Creek, Pine Creek and Ten Mile.

-Use scare devices and herding.

BOUNDARY DESCRIPTION

Beaver, Garfield, Iron and Piute counties - Boundary begins at Beaver and Interstate 15; then southerly on I-15 to Highway SR-20; easterly on SR-20 to US-89; northerly on US-89 to Interstate 70; westerly on I-70 to I-15; southerly on I-15 to Beaver.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Area (acres)
Forest Service	363,977	71
Bureau of Land Management	117,190	22
Private	21,100	4
State	15,120	3
Wildlife Resources	2,580	1
TOTAL	519,697	100

*Surveyed 1969; F. & G. Bull. 70-1

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	CONTROL PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992	627	57		--	57	9	--	--
1993	677	73		--	73	11	--	--
1994	1,054 *17	48		-- *9	48	5	--	--
1995	942	72		5	77			
1996	642	88			88	14		

* Landowner Permits

ELK HERD UNIT #33 - BEAVER (Continued)**CLASSIFICATION SUMMARY**

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	257	199	39	--	19	--	4	--
93-94	128	--	34	--	6	--	--	--
94-95	289	--	51	--	8	--		
95-96	145	288	48	--	8	4	--	0
96-97								

PELLET GROUP TREND

TRANSECT (Elevation)	92-93	93-94	94-95	95-96	96-97
Sulphurdale					8
AVERAGE					

*** MANAGEMENT PLAN SYNOPSIS ***

ELK HERD UNIT #34

INDIAN PEAKS

Status:

The Indian Peaks elk herd continues to offer a quality bull hunt. Rifle harvest remains consistent at 22 bulls with an average age of 5 years. A 1995 aerial survey yielded 350 counted winter elk. With no antleless harvest in 1995, that number has probably increased somewhat, although remaining under the management objectives of 500 counted winter elk in the core area. Calf production remains good at about 50 calves:100 cows.

No identifiable range problems are apparent at this time. Utilization transects done with the BLM continue to show a spring use of less than 5% for all wildlife species and wild horses. Range improvements on the Indian Peak WMA have created an abundance of high quality forage.

BOUNDARY DESCRIPTION

Beaver, Iron and Millard counties - Boundary begins at Milford and the Union Pacific Railroad tracks; then southwesterly along these tracks to the Utah-Nevada state line; north along this state line to Highway SR-21; southeasterly on this highway to Milford.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	619,520	82
Private	70,400	9
State	40,400	9
TOTAL	760,320	

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST					LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	27	23	96	0	23	85	27	--
1993	104	38		50	88	85	38	66
1994	99 *7	27	100	55 *6	82	83	33	66
1995	26							
1996		30	96				32 *1	0

* Landowner Permits

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93								
93-94	275	--	49	--	14	--		
94-95	221	350	47	--	11	--		
95-96	168		51		10			

96-97								
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* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #35

PANGUITCH LAKE

Status: A signed Elk Management Plan is now in place for this unit. The plan calls for a ceiling population of 500 animals (winter count). Future management of this unit will conform to the guide lines of this plan. Winter aerial census will be used to monitor population trends of this unit.

Management

Objective: Continue a limited entry unit with the objective of harvesting mature bulls. Herd numbers will be controlled by antlerless harvest.

Strategies: Lack of data on production and funding to conduct a helicopter census on a semi-annual basis.

-Increase effort on summer classification and budget for adequate funding for winter aerial classification.

Some depredation has been experienced on the northwest portion of this unit. There are some indications that elk from the Beaver unit maybe wintering on this unit and causing some of the depredation.

-Continue with antlerless harvest in the area on areas that experience agricultural depredation.

Illegal kills are a persistent problem on this unit.

-Enhance I&E efforts and Law Enforcement efforts on the units to better educate hunter on identification of big game animals.

BOUNDARY DESCRIPTION

Garfield, Kane and Iron counties - Boundary begins at Interstate 15 and Highway SR-20; then easterly on SR-20 to Highway US-89; southerly on US-89 to SR-14; Westerly on SR-14 to Interstate 15; northerly on Interstate 15 to SR-20.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Area (acres)
Forest Service	298,700	53
Bureau of Land Management	162,700	29
Private	72,100	13
State	19,900	4
Wildlife Resources	4,800	1
National Parks and Monuments	7,600	1
TOTAL	565,800	

*Surveyed 1963; F. & G. Bull. 62-5

ELK HERD UNIT 35 - PANGUITCH LAKE (continued)**HARVEST TREND SUMMARY**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	66	21	85	29	50	76	22	44
1993	71	27		35	62	87	27	44
1994	102 *7	21		66 *4	43	62	38	64
1995	71	2		23	25			
1996	62	29		26	55		33	30

* Landowner Permits

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93		415						
93-94	288	117	53	--	7	--		
94-95	--	427						
95-96	--	--						
96-97	539		64		36			

***** MANAGEMENT PLAN SYNOPSIS *****

ELK HERD UNIT #36

MOUNT DUTTON

Status: Population well over objective on this unit. Calf production in 1993 improved over last several years. Possibly 200-250 animals migrate from wintering areas on this unit to adjacent units.

Management

Objective: The Elk Herd Management Plan sets a population goal of 650-700 animals on winter census. One hundred and fifty adult elk to be managed on summer range on plateau north Forest Creek.

Problems &

Strategies: Drought related forage conflicts of cattle/elk on the north end of the unit are being resolved. Forage basket studies and USFS enclosure were implemented in 1991. Results of study are being used in revision of Jones Corral Cattle Allotment Management Plan. PJ tree invasion on Mud Springs chaining to be addressed in allotment revision.

Continue limited entry bull harvest. Antlerless removal will address population increase and depredation harvest on agriculture fields.

Continue pre-season classification, winter aerial census, to increase data base on herd vitality and habitat use areas.

Continue cooperative USFS/DWR forage studies to increase knowledge of cattle and elk range impacts. Cattle trespass to be controlled to increase accuracy of data on study plots.

BLM to continue to implement range rehabilitation as outlined in Antimony Habitat Management Plan.

BOUNDARY DESCRIPTION

Piute and Garfield counties - Boundary begins at the junction of Highways US-89 and SR-62 near Kingston; then easterly on SR-62 to Highway SR-22; southerly on SR-22 and the Antimony-Bryce Canyon road to Highway SR-12; westerly on SR-12 to US-89; northerly on US-89 to SR-62.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	27,520	8
Bureau of Land Management	188,800	51
Private	113,920	31
State	38,400	10
TOTAL	368,640	100

ELK HERD UNIT 36 - MOUNT DUTTON (conyinued)**HARVEST TREND SUMMARY**

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	55	42	67	0	42	76	55	0
1993	66	37		15	52	79	44	22
1994	99 *2	35	94	28 *0	63	64	55	44
1995	330	48	92	207	255	80	77	253
1996	440	41		208	249		43	407

* Landowner Permits

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	53	403	20		18		11	
93-94	413	725	39	--	21	--	8	
94-95	327	1517	52	--	24	--	8	4
95-96	240	1189	44		25	16	7	5
96-97	271		47		23			

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #37

BOULDER MOUNTAIN

Status: The Boulder elk herd is slowly expanding into new areas. There are still drainages with very light elk use. The majority of the elk have been wintering in two herds, one near Antimony, and the other in the Deer Creek and Boulder Creek drainages. The antlerless hunts are helping to encourage elk to winter in other drainages on the mountain. Sportsmen and non-consumptive users alike are discouraged by the absences of mature bulls on this

Winter and summer range is generally in good condition for elk. But habitat decline is the critical problem. Opportunities to reverse this trend seem to be diminishing. Spring green-up is limited on spring range. Winter browse is becoming old, decadent, and disappearing. Throughout the unit the major concern is an encroaching pinyon pine and juniper forest. An additional concern is the encroachment of spruce-fir into the aspen areas.

The 1996 computer model puts the elk herd well below the 1,100 postseason herd objective.

Management

Objective: Maintain a wintering population of 1, 100 head of elk, 200 of which must be in the North Creek drainage area; and or, on the North Slope from Pleasant Creek around to Polywong Lake. Continue to monitor the herd as it establishes in new areas. Monitor elk use on vegetation.

Strategies: Most of the lower winter range is covered with young invading pinyon pine and juniper forest. High summer range is declining because of an advancing spruce-fir forest in the once aspen and open meadow.

-Cooperative interagency range enhancement projects to reverse trend and develop habitat for both elk and livestock.

Large wintering herds near Boulder and Antimony.

-Maintenance limited antlerless hunts to encourage elk to move into other drainages on the mountain.

BOUNDARY DESCRIPTION

Garfield, Piute, Sevier and Wayne counties - Boundary begins at Antimony and the Dry Wash road; then northeasterly on the Dry Wash road to Parker Lake and continuing eastward to the Long Hollow road; northeasterly on this road to Loa and Highway SR-24; easterly on SR-24 to the Notom-Bullfrog road; southerly on this road to the Burr Trail; westerly on the Burr Trail to the Harris Wash road; southwesterly on this road to the junction of the Escalante River and Harris Wash; westerly along this river to the town of Escalante and Highway SR-12; westerly on SR-12 to the Main Canyon road; northwesterly on this road to Widstoe Junction and Highway SR-22; north on SR-22 to Antimony.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Summer range Area (acres)	%	Winter Range Area (acres)	%
Forest Service	752,000	100	174,300	20
Bureau of Land Management			630,000	70
Private			28,900	3
State			53,900	6
National Parks and Monuments			9,600	1
TOTAL	752,000		896,700	

ELK HERD UNIT 37 - BOLDER MOUNTAIN(continued)**HARVEST TREND SUMMARY**

Year	Hunters Afield	HARVEST				% Success	CONTROL PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992	1,797	218	33	34	252	14		44
1993	1,379	166		32	198	14	--	88
1994	1,729 *89	166		33 *71	199	11	--	44
1995	1,227	77		66	143			
1996	1,422	192		34	226			55

* Landowner Permits

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	388	670	42		15	3	8	6
93-94	181	478	37	--	10	2	4	2
94-95	595	--	46	--	10			
95-96	294	--	52	--	15	--	5	--
96-97	424		53		17		4	0.2

PELLET GROUP TREND

TRANSECT (Elevation)					
	92-93	93-94	94-95	95-96	96-97
Wildcat Reseeding	13	27	24	20	12
Jorgensen Flat	4	5	3	2	3
Happy Valley	0	0	0	0	0
Wide Hollow (6,500)	0	0	0	0	0
Nazer Draw	7	12	14	9	7
Mud Flat (new)	5	2	1	2	2
North Creek (new)	4	2	2	4	3
White Flat (new)	1	1	1	3	4
Pine Creek (new)	0	0	1	0	0
AVERAGE		5	5	4	

* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #38

BARNEY TOP-CANAAN MOUNTAIN

Status: Fluctuating summer herd of approximately 150 animals extending from Boulder Mountain Unit. Some migration to Mt. Dutton Unit to winter. Unit was created to provide for quality hunt area.

Objective: Draft Management plan to be considered in spring 1994. Plan sets management goal at 150 adult elk on summer range.

Problems & Strategies: Continue to manage as limited entry unit. Increase efforts to develop reliable monitoring technique of population number and use areas.

BOUNDARY DESCRIPTION

Garfield County - Boundary begins at the junction of Highways SR-12 and John's Valley Road; then northerly along John's Valley Road to Widtsoe Junction; southeasterly along the Escalante - Main Canyon Road to Escalante; southerly along the Alvey Wash - Camp Flat Road to the Garfield - Kane county line; westerly along this county line to the Kodachrome Basin Road; northerly to Cannonville and SR-12; northwesterly along SR-12 to John's Valley road.

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992	5	3	100	--	3	67	5	0
1993	5	3		--	3	67	5	0
1994	5 *40	4	100	-- *1	4	80	5	0
1995	4 16*	4	100		4	100		
1996	4	3					4	

* Landowner Permits

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	66		38		28		1	
93-94								
94-95	33		39		44		11	

95-96								
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* * * MANAGEMENT PLAN SYNOPSIS * * *

ELK HERD UNIT #39

PAUNSAUGUNT

Status: A majority of the animals on this unit move north and winter on Mt. Dutton. It is actually an expansion of the Mt. Dutton population. A small number of elk are starting to winter south of Alton.

Objective: The 1994 Elk Management Plan is to manage for approximately 200 mature elk summering on USFS lands and 100 mature on adjacent lands. Continue with limited entry quality bull hunt. Alton Big Game Posted Hunting Unit will recommend harvest in Alton area.

Strategies:

- Increase efforts to identify winter use areas on unit.
- Develop monitoring technique for summer population goal.
- Continue antlerless harvest as needed to control herd numbers and address depredation problems in Alton area.
- Assist USFS in developing forage studies to identify potential cattle/elk conflicts.
- Continue to work with sportsmen and private landowner organizations.

BOUNDARY DESCRIPTION

Garfield and Kane counties - Boundary begins at the junction of Highways US-89 and SR-12; then easterly on SR-12 to the Paria River; southerly along this river to the Utah-Arizona state line; west along this state line to Highway Alt. US-89; north on Alt. US-89 to US-89 in Kanab; northerly on US-89 to SR-12.

HARVEST TREND SUMMARY

		HARVEST					LIMITED PERMITS	
Year	Hunters Afield	Bulls	% Mature Bulls	Ant.	Total	% Success	Bull	Ant.
1992	30	15	100	14	29	94	15	16
1993	27	11		13	24	89	11	16
1994	51 *2	15	100	19 *0	32	63	19	32
1995	4 27*	4 6	100 83	5 10	9 16	100 59	4 8	5 19
1996	4	3					4	

* Landowner Permits

CLASSIFICATION SUMMARY

	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
Year	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93	74		53		19		3	
93-94	54	--	56	--	13	--	3	--
94-95	135	--	41	--	26	--	16	--
95-96	146		68		6		2	
96-97	338		57		33			

***** MANAGEMENT PLAN SYNOPSIS *****

ELK HERD UNIT #40

CEDAR MOUNTAIN

Status: Historically this elk herd has been relatively small, indications are that it may be building. Most of the elk found on the western portion of this unit are on private lands. Inclusion of the Panguitch Lake Unit (that portion of the unit that was south of State Highway 14) has included more Federal lands into this elk unit.

Management

Objective: To continue to work with the private landowners on this unit in an effort to increase the number of the elk on this unit.

Problems &

Strategies: No consistent winter trend counts available on this unit.
-Attempt to establish an annual winter aerial census so a population trend may be established.

Private land restricts the hunting opportunities available on the unit.

-Continue to recommend hunts that will allow hunters that can gain access to these private lands the opportunity to hunt (open bull).

-Work with the Forest Service on a road management plan. Close roads after timber harvest on selected summer range areas.

BOUNDARY DESCRIPTION

Iron, Washington and Kane counties - Boundary begins at Cedar City and Interstate 15; then south on I-15 to Zion National Park boundary at the Kolob entrance; south and east along the park boundary to Highway SR-9; east on SR-9 to Highway US-89; north on US-89 to the intersection of US-89 and SR-14; west on SR-14 to Cedar City and Interstate 15.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	19,200	8
Bureau of Land Management	30,080	12
Private	174,080	76
State	8,320	4
TOTAL	231,680	

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992	598	67	*	10	77	13	16	22
1993	694	20		32	52	7	--	54
1994	454	64		12	76	17	--	22
1995	357	9		27	36			
1996	731	57		16	73			22

*data lacking

CLASSIFICATION SUMMARY

*No classification done on Cedar Mountain - mostly private ground.

*** * * MANAGEMENT PLAN SYNOPSIS * * ***

ELK HERD UNIT #41

PINE VALLEY

Status: The Pine Valley elk herd has been reduced through heavy hunting to the point where it is not feasible at this time to have a scheduled hunt. The management plan is to keep this herd at a level where no elk population is resident in the area.

BOUNDARY DESCRIPTION

Washington - Boundary begins at Interstate 15 and the Kanarraville-Harmony Mountain overpass; south on I-15 to the Snowfield Interchange and Leap Creek; west along Leap Creek to Anderson Valley and the Summit Trail; north along this trail to Long Flat Reservoir; east to Gordon Spring and the Page Ranch-New Harmony road; south and east on this road to the Bumblebee-Harmony Mountain road; east on this road to I-15.

HARVEST TREND SUMMARY

Year	Hunters Afield	HARVEST				% Success	LIMITED PERMITS	
		Bulls	% Mature Bulls	Ant.	Total		Bull	Ant.
1992	26	0	--	23	23	88	0	27
1993	66	0	0	19	19	29	0	66
1994	37	2	100	8	10	27	5	32
1995	5							
1996	closed							

CLASSIFICATION SUMMARY

Year	SAMPLE SIZE		CALVES/100 COWS		BULLS/COWS		MATURE BULLS	
	Pre	Trend	Pre	Trend	Pre	Trend	Pre	Trend
92-93								
93-94								
94-95								
95-96								

IV. PRONGHORN

A. HISTORY OF PRONGHORN MANAGEMENT IN UTAH

The original range of Pronghorn in Utah extended throughout most foothills and lower valleys of the state. As settlements and agricultural developments increased, Pronghorn were forced from historical choice ranges to less desirable desert ranges. They gradually declined to more isolated small bands. Even though the arid deserts were harsh and less desirable, they offered the protection necessary to keep the remaining Pronghorn from becoming completely eradicated.

Unregulated livestock grazing reached an all-time high in the early 1900's and eventually extended even to the deserts. Competition for forage and water on these low-yielding ranges caused a further decline in the population.

In an effort to stem the decline, Pronghorn were given total protection in 1898. Nelson reported 670 Pronghorn on 10 large areas in 1922. No appreciable increase was noted for the next 25 years. they were not legally hunted again until 1945. It was determined then that a small band in Daggett County was sufficiently large to allow a limited harvest. Other bands were included as huntable populations developed in the state.

The number of applications for Pronghorn permits increased steadily until 1980, when the number decreased from 5,503 in 1979 to 3,752 in 1980. This decrease was due to a permit fee increase. The Pronghorn permit had cost \$10 since the 1940's. In 1980, the Board of Big Game Control increased the fee to \$25. The fee for doe and fawn permits was reduced to \$10 in 1987 and the two year waiting period was eliminated. Applications for permits have increased since the permit fee increase and in 1987 reached 6,887. Likewise, the number of permits available has also slowly increased.

There were 10,438 permits sold in 1990 and 1,347 hunters afield harvested 1,252 Pronghorn, a record high since legal hunting started in 1945. Harvest increased in 1991 and set a new record in 1992 of 1541 antelope.

In 1979, the Board of Big Game Control authorized an archery season for Pronghorn beginning two weeks before the regular season. Applicants successful in drawing a permit had the option of using archery tackle during this two-week season. If they were not successful, they could still use a rifle during the regular season. Beginning in 1983, archers wishing to participate during the two-week season were required to purchase a ten dollar archery Pronghorn permit. In 1991, archers received a limited archery buck antelope season, and was again authorized in 1992.

Beginning in 1988, the Ute Indian Tribe received 10 percent of the authorized resident permits for those Pronghorn units within the boundaries of the Uintah and Ouray Reservations.

The Division's policy of reintroducing Pronghorn into their former ranges through a trapping and transplant program has aided materially in increasing huntable numbers in the state. A summary of pronghorn permits available, hunters afield and harvest in presented in the section on pronghorn.

YEARLY SUMMARY OF UTAH'S PRONGHORN HARVEST 1946-1996

YEAR	<u>Archery</u> Hunters		<u>Any Weapon</u> Hunters		<u>Restricted/Control</u> Hunters			<u>Total</u> Hunters		
	Bucks	Afield	Bucks	Afield	Bucks	n	Afield	Bucks	Doe/Fawn	Afield
1946			62	66				62	0	66
1947			85	96				85	0	96
1948			No Hunt					0	0	0
1949			43	45				43	0	45
1950			26	35				26	0	35
1951			No Hunt					0	0	0
1952			No Hunt					0	0	0
1953			No Hunt					0	0	0
1954			20	25	19	25	50	39	25	75
1955			39	66	2	15	30	41	15	96
1956			47	102				47	0	102
1957			34	93				34	0	93
1958			33	84				33	0	84
1959			74	142				74	0	142
1960			99	161				99	0	161
1961			92	153				92	0	153
1962			74	122				74	0	122
1963			50	190				50	0	190
1964			56	96				56	0	96
1965			51	81				51	0	81
1966			73	105				73	0	105
1967			93	122				93	0	122
1968			114	151				114	0	151
1969			139	169				139	0	169
1970			158	181				158	0	181
1971			174	218				174	0	218
1972			198	251				198	0	251
1973			169	253				169	0	253
1974			183	254				183	0	254
1975			190	232				190	0	232
1976			180	224				180	0	224
1977			208	242				208	0	242
**1978			276	314				276	0	314
**1979			270	310				270	0	310
**1980			280	308		2	2	280	2	310
**1981			323	339				323	0	339
**1982			365	405		35	40	365	35	445
**1983			425	476		38	39	425	38	515
1984			466	508	34	169	225	500	169	733
1985			448	496	66	151	234	514	151	730
1986			469	513	22	288	346	491	288	859
1987			534	566		446	488	534	446	1054
1988			571	601	13	205	282	584	205	883
1989			604	636	13	373	456	617	373	1092
1990			605	634		647	713	605	647	1347
1991	30	83	604	635		773	859	634	773	1577
1992	74	113	646	658		821	959	720	821	1730
1993	61	101	541	568		947	1204	602	947	1873
1994	76	119	556	572		470	610	632	470	1301
1995*	56	84	533	555	16	195	671	605	195	1310
1996	58	82	477	493		92	129	535	92	704
TOTAL	297	500	11280	13053	185	5600	7208	11762	5600	20761

* PHU data included in Control/Restricted harvest data.

C. 1996 UTAH PRONGHORN HARVEST

Buck Pronghorn Harvest. Any Weapon. 1996

Unit Name (#)	# of Permits	Hunters Afield	# of Hunter Days	Bucks Harvested	% Success
Box Elder (01)					
Pilot Mountain	6	6	20	6	100%
Snowville	11	11	22	11	100%
Promontory	11	11	26	11	100%
River Bed (02)	22	22	36	22	100%
Snake Valley (02)	66	66	123	63	95%
Rich (03)	22	22	44	22	100%
SW Desert (04)	28	28	70	28	100%
Cedar City (05)	11	11	20	11	100%
Daggett (06)	22	22	39	20	91%
Bonanza* (07)	48	48	67	45	94%
Myton Bench* (08)	17	17	24	17	100%
San Rafael (09)	5	5	7	5	100%
Parker Mountain (10)	88	88	145	82	93%
Icelander Wash (11)	33	33	89	33	100%
Hatch Point (12)	2	2	2	2	100%
Cisco (13)	22	22	48	22	100%
John's Valley (14)	11	11	28	11	100%
East Bench (16)	11	11	26	9	82%
Halfway Hollow* (17)	8	8	21	8	100%
Rush Valley (18)	5	5	6	5	100%
Panguitch Valley (21)	2	2	3	2	100%
Indian Peaks (22)	39	39	224	39	100%
Sage Hen Hollow (23)	3	3	6	3	100%
Totals	493	493	1096	477	97%

*Does not include permits given to Ute Indian tribe.

C. 1996 UTAH PRONGHORN ARCHERY HARVEST

Buck Pronghorn Archery Harvest by unit.

Unit Name (#)	# of Permits	Hunters Afield	# of Hunter Days	Bucks Harvested	% Success
Box Elder (01)					
Pilot Mountain	1	1	4	1	100%
Snowville	2	2	8	2	100%
Promontory	2	2	10	0	0%
River Bed (02)	5	5	10	5	100%
Snake Valley (02)	13	13	46	11	85%
Rich (03)	4	4	10	2	50%
SW Desert (04)	5	5	15	3	60%
Cedar City (05)	2	2	11	1	50%
Daggett (06)	4	4	14	2	50%
Bonanza* (07)	8	8	13	8	100%
Myton Bench* (08)	3	3	8	2	67%
San Rafael (09)	1				??
Parker Mountain (10)	8	8	28	6	75%
Icelander Wash (11)	6	6	24	4	67%
Cisco (13)	4	4	12	4	100%
John's Valley (14)	2	2	30	0	0%
Puddle Valley (15)	1				??
East Bench (16)	2	2	2	2	100%
Halfway Hollow (17)	1				??
Rush Valley (18)	1				??
Indian Peaks (22)	7	7	26	5	71%
Totals	82	78	271	58	74%

*Does not include permits given to Ute Indian tribe.

C. 1996 UTAH PRONGHORN HARVEST

Doe/Fawn Pronghorn Harvest

Unit Name (#)	# of Permits	Hunters Afield	No. of Hunter Days	Doe/Fawn Harvested	% Success
Snowville (01)	5	4	9	4	100%
Crawford Mtn. (03)	66	59	104	29	49%
Rich (03)	33	33	54	27	82%
Daggett (06)	11	11	20	11	100%
Bonanza (07)	22	17	22	16	94%
Pelican Lake (17)	5	5	5	5	100%
Totals	142	129	214	92	71%

*Does not include permits given to Ute Indian tribe.

PRONGHORN HERD UNIT #1 - BOX ELDER**BOUNDARY DESCRIPTION**

Box Elder, Tooele, Salt Lake, Davis and Weber counties - Boundary begins at the Utah-Idaho state line and Interstate 15; then west along this state line to the Utah-Nevada state line, south along this state line to Interstate 80, east on I-80 to I-15, north on I-15 to the Utah-Idaho state line.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	109,440	24
Private	126,080	27
Railroad	225,280	49
TOTAL	460,800	

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest		Percent Success	Permits sold	
		Buck	Doe/Fawn		Buck	Doe
1992	113	37	57	83	38	77
1993	107	44	54	92	45	72
1994	102	41	51		43	66
1995	44	33	7	91	33	7
1996	37	30	4	91	33	5

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93		444				
93-94		384				23
94-95	198	--	23	--	38	--
95-96	232		4		49	
96-97	144		50		52	

PRONGHORN HERD UNIT #2 - WEST DESERT**BOUNDARY DESCRIPTION**

Tooele, Juab and Millard counties - Boundary begins at Rowley Junction on Highway I-80; then southerly along the crest of the Stansbury, Onaqui and Sheeprock mountains to the Cherry Creek-Death Canyon road; easterly on this road to Highway US-6 at Tintic Junction; southwesterly on US-6 to the Utah-Nevada state line; northerly along this stateline to I-80; easterly on I-80 to Rowley Junction.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	2,016,000	94
Private	5,120	1
State of Utah	113,280	5
TOTAL	2,134,400	100

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Doe/Fawn Harvest	Percent Success	Permits Sold
1993	130 40*	117 40		90 100	131 40
1994	133 108** 13	122	85 12	92 78 92	136 110 13(mitig)
1995	123 7	97	7	74 100	131 7(mitig)
1996	106 10	100 3	7	94 100	106 10(mitig.)

note -- The above table includes archery hunt data with the rifle hunt.

* Dugway PHU - permits were intended to be hunters choice in a December hunt. Dugway, however, changed their mind and held the hunt in September and thus the estimated harvest was all bucks. The data is incomplete for this hunt.

** Hunt area was 66% in unit 2 (Gandy, Eskdale) and 33% in unit 4 (Garrison).

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	527	--	44	*	56	--
93-94	772	1468	40	*	51	40
94-95	84	1359	17	*	28	34
95-96	435	959	32	*	43	33
96-97	414	--	32	--	52	--

PRONGHORN HERD UNIT #3 - CACHE

BOUNDARY DESCRIPTION

Cache, Rich, Weber and Box Elder counties - Boundary begins at the Utah-Idaho state line and Interstate 15; then east along this state line to the Utah-Wyoming state line; south on this state line to Highway SR-16; north on SR-16 to Highway SR-39; west on SR-39 to the county road from SR-39 to Hardware Ranch (Ant Flat Road); north on the Ant Flat Road to Hardware Ranch and Highway SR101; west on SR-101 to Highway US 89-91; southerly on US 89-91 to I-15; north on I-15 to the Utah-Idaho state line.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
USDA-Forest Service	7040	2
Bureau of Land Management	161,280	38
Private	184,320	44
State of Utah	67,120	16
TOTAL	419,760	100

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest		Percent Success	Permits sold	
		Buck	Doe/Fawn		Buck	Doe
1992	152	21	114	89	26	126
1993	186	22	97	64	26	181
1994	102	18	55	72	18	84
1995 ¹	135	16	96	83	20	124
1996 ²	137	24	61	62	26	111

¹ Includes 3 landowner permits

² Includes 12 landowner permits

CLASSIFICATION DATA

	SAMPLE SIZE			FAWNS/100 DOES		BUCK/100 DOES		
Year	Pre	Post	Trend	Pre	Trend	Pre	Post	Trend
92-93								
93-94								
94-95	173	--	167 ¹	79		22	--	14 ²
95-96		--	161 ¹				--	17 ²
96-97	206	256	175 ¹	90			21 ²	14 ²

¹ Fixed wing count between SR 39, SR 16, and SR 30 between 15 April and 15 May.

² Bucks/100 antlerless.

PRONGHORN HERD UNIT #4 - MORGAN-SOUTH RICH**BOUNDARY DESCRIPTION**

Morgan, Rich, Summit and Weber counties - Boundary begins at the junction of Interstates 84 and 80 near Echo; then northeasterly on I-80 to the Utah-Wyoming state line; north along this state line to Highway SR-16; north on SR-16 to Highway SR-39 near Woodruff; west on SR-39 to Highway SR-167 (Trappers Loop Road); south on SR-167 to Highway SR-30 at Mountain Green; west on SR-30 to I-84; east on I-84 to I-80.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
USDA-Forest Service		
Bureau of Land Management		
Private		
State of Utah		
TOTAL		

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest		Percent Success	Permits sold	
		Buck	Doe/Fawn		Buck	Doe
1992					40	100
1993					28	30
1994	14	14	00		14	00
1995*	56	15	38	94	16	40
1996	118	24	56	68	26	99

* Included PHU data

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93						
93-94						
94-95						
95-96	NO DATA	NO DATA				
96-97						

PRONGHORN HERD UNIT #5 - CEDAR CITY**BOUNDARY DESCRIPTION**

Iron and Beaver Counties - Boundary begins at Cedar City; then north along Highway SR-130 to Minersville; northwesterly along Highway SR-21 to Milford and the Union Pacific Railroad; southwesterly along the Union Pacific Railroad to Modena; easterly along Highway SR-56 to Cedar City.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	420,480	83
Private	48,000	10
State of Utah	38,400	7
TOTAL	506,880	

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Doe-Fawn Harvest	Percent Success	Permits Sold
1992	11	9	--	88	11
1993	11	10	--	91	11
1994	19 *5	18	-- *2	95	20
1995	13	11			
1996	13	12		92	13

* Landowner Permits

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	75	236	36	--	31	--
93-94						
94-95	120		44	--	46	
95-96	96	81	31		13	
96-97						

*not yet available

PRONGHORN HERD UNIT #6 - DAGGETT**BOUNDARY DESCRIPTION**

Daggett, Summit Counties - Boundary begins at the Utah, Wyoming and Colorado state lines (3 corners); then south along the Utah - Colorado state line to the Green River; west along the Green River to Flaming Gorge Reservoir; west along the south shore of Flaming Gorge Reservoir to Carter Creek; west up this creek to Highway SR-44; north on SR-44 to the upper Sheep Creek Geological Loop road (Summit Springs road); west on this road to the Hickerson Park road; west on this road beyond Half Moon and Hickerson Parks to Birch Creek; north along this creek to the Ashley National Forest boundary; west along this boundary to its junction with the Wasatch Forest Boundary (Birch Creek-Burnt Fork drainage divide); south along this drainage divide and the Sheep Creek-Burnt Fork drainage divide to the Summit-Duchesne County line at the summit of the Uinta Mountains; west along this county line to the head of the Henry's Fork drainage at Gun Sight Pass; north along Henry's Fork to the Wyoming-Utah state line; east along this state line to Three Corners.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management		
Private		
Forest Service		
TOTAL		

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Doe-Fawn Harvest	Percent Success	Permits Sold	
					Buck	Dow/Fawn
1992	71 (70)	67	50	94 (71)	74	82
1993	58 (44)	50	31	86 (70)	58	49
1994	43 (21)	38	20	88 (95)	46	22
1995	40 (22)	35	11	88 (50)	42	22
1996	26 (11)	22	11	85 (100)	26	11

()= Doe/Fawn permits

CLASSIFICATION DATA

Year	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93	302	--	39		28	
93-94	123	306	34		41	
94-95	139	387	56		34	
95-96	205	231 *	51		33	
96-97	256	529	72		38	

* Partial count

PRONGHORN HERD UNIT #7 - BONANZA**BOUNDARY DESCRIPTION**

Uintah and Daggett counties - Boundary begins at the Utah-Colorado state line and the White River; then west along this river to Highway SR-88; north of SR-88 to the Green River; northeasterly along this river to Highway SR-45; north on SR-45 to Highway U.S. 40; west on U.S. 40 to Highway U.S. 191; north on U.S. 191 to the Daggett-Uintah county line; easterly along this county line to the Utah-Colorado state line; south along this state line to the White River. (excluding all Tribal Land and Dinosaur National Monument.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	414,720	82
Private	44,160	8
State of Utah	48,000	10
TOTAL	506,880	100

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Doe-Fawn Harvest	Percent Success	Permits Sold	
					Buck	Doe/Fawn
1991	64(18)	64	(17)	100(94)	73	22
1992	71	70	0	99	72	0
1993	47	47	0	100	47	0
1994	59	59	0	100	59	0
1995	71 (22)	70	(22)	99 (100)	72	22
1996	56 (17)	53	(16)	95 (73)	56	22

()= Doe/Fawn permits

CLASSIFICATION DATA

Year	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
	Pre	Trend	Pre	Trend	Pre	Trend
91-92	242	817	61		63	
92-93	293	--	79		44	
93-94	162	854	68		21	
94-95	286	775	39		64	
95-96	135	892	85		48	
96-97	246	--	56		58	

PRONGHORN HERD UNIT #8 - MYTON BENCH**BOUNDARY DESCRIPTION**

Duchesne and Uintah counties - Boundary begins at Duchesne and Highway US-191; then southwesterly on US-191 to the Argyle Canyon road; southeasterly on this road to Nine Mile Canyon Road; east along this road to its end near Bulls Canyon; south from the end of the road to Nine Mile Creek; east along this creek to the Green River; north along this river to the Duchesne River; northwesterly along this river to Highway US-40; west on US-40 to Duchesne (excluding all Ute Tribal lands).

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	98,700	18
Bureau of Land Management	290,745	53
Private	30,887	6
State of Utah	34,456	6
Indian	91,600	17
TOTAL	546,389	100

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Doe-Fawn Harvest	Percent Success	Permits Sold	
					Buck	Doe/Fawn
1992	23(11)	23	8	100(71)	23	11
1993	32(49)	31	46	97(94)	32	55
1994	43(36)	39	35	90(97)	43	36
1995	29	24	0	83	29	0
1996	24	24	6	100	24	0

()= Doe/Fawn permittees

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	421	984	49		65	
93-94	402	560	42		56	44
94-95	683	604	21		68	39

95-96	592	422*	83		59	28
96-97	778	963	69		75	38

*Poor count conditions.

ROUGHORN UNIT #9 - SAN RAFAEL

BOUNDARY DESCRIPTION

Emery, Wayne and Garfield Counties - Boundary begins at Interstate 70 and the Green River; then south along the Green and Colorado rivers to the Dirty Devil River; northwest along this river to the Nuddy River; northwest along this river to I-70; east along I-70 to the Green River.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (arres)	Percent
Bureau of Land Management	276,480	100

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Percent Success	Permits Sold
1992	no hunt	--	--	--
1993	no hunt	--	--	--
1994	6*	6	100	6
1995	6	5	83	6
1996	5	5	100	6

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	91	--	22		32	
93-94	--	223	--		--	
94-95	57	168	25		53	
95-96	36		36		173	
96-97	no data					

PRONGHORN HERD UNIT #10 - PARKER MOUNTAIN**BOUNDARY DESCRIPTION**

Wayne, Garfield, Piute and Sevier counties - Boundary begins at Richfield; then northerly along Highway US-89 to Salina; easterly on Interstate 70 to the Sevier-Emery county line; southerly along this county line to the Capitol Reef National Park boundary; westerly and southerly along this boundary to Highway SR-24 near Torrey; westerly on SR-24 to Highway SR-12; southerly on SR-12 past Escalante to Forest Highway 17 (Main Canyon road); westerly on this road to the west rim of the Griffin Top; north along this rim to Antimony Creek drainage; westerly along this drainage to Highway SR-22; northerly on SR-22 to Highway SR-62; northerly on SR-62 to SR-24; northerly on SR-24 to Highway SR-119; westerly on SR-119 to Richfield.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	151,400	51
Private	22,400	8
State of Utah	110,000	36
Forest Service	16,000	5
TOTAL	295,680	

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Doe/Fawn Harvest	Total Harvest	Percent Success	Permits Sold
1992	661	137	480	617	93	708
1993	880	97	562	659	75	880
1994	301	114	133	247	79	301
1995	126	115	0	115	91	
1996	96	88		88	92	96

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	611	1856	80	--	32	--
93-94	487	1384	48	--	54	--
94-95	353	1353	29	--	54	--
95-96	446	989	46	--	35	--
96-97	786	1238	55		54	

PRONGHORN HERD UNIT #11 - ICELANDER WASH**BOUNDARY DESCRIPTION**

Carbon and Emery Counties - Boundary begins at Helper; then east and south along the base of the Book Cliffs to the Green River; south along the Green River to I-70 at the Green River; west along I-70 to Highway SR-10; north along SR-10 to Highway U.S. 6; north along U.S. 6 to Helper.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	664,960	84
Private	85,760	11
State of Utah	42,880	5
TOTAL	793,600	

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Doe-Fawn Harvest	Percent Success	Permits Sold
1992	37	34	0	92	39
1993	27	25	0	91	27
1994	33	30	0	91	33
1995	32	26	0	81	32
1996	39	37	0	95	39

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
91-92	281	653	67		37	
92-93	269	458	33	--	24	
93-94	260	660	31		54	
94-95	177	703	47		22	
95-96	189	694	69		36	
96-97	229	895	31	--	30	--

PRONGHORN HERD UNIT #12 - HATCH POINT**BOUNDARY DESCRIPTION**

San Juan County - Boundary begins at junction of Highway U.S. 191 and SR-211; then westerly along SR-211 to the boundary of Canyonlands National Park; northerly along this boundary to the Colorado River; northerly along this river to Hatch Wash; southeasterly along this wash to Highway U.S. 191; southerly along U.S. 191 to its junction with Highway SR-211.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	197,760	81
Private	7,040	3
State of Utah	39,680	16
TOTAL	244,480	

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Percent Success	Permits Sold
1993	3	3	100	3
1994	3	3	100	3
1995	3	3	100	3
1996	2	2	100	2

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	105	154	22	--	30	
93-94	95	142	12		32	
94-95	120	135	25		31	
95-96	86	125	18		23	
96-97	66	150	16	--	35	--

PRONGHORN HERD UNIT #13 - CISCO**BOUNDARY DESCRIPTION**

Grand County - Boundary begins at the Utah-Colorado state line and Highway I-70; then west along I-70 to Thompson; north along the Thompson and Sego Canyon Roads to the summit of the Book Cliffs, northeast along this summit to the Utah-Colorado state line; south along this state line to Highway I-70.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	525,440	87
Private	15,360	2
State of Utah	64,000	11
TOTAL	604,800	

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Percent Success	Permits Sold
1993	11	11	100	11
1994	19	18	95	19
1995	25	24	96	26
1996	26	26	100	26

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	367	352	70	--	33	--
93-94	204	434	88		26	
94-95	219	408	53		46	
95-96	241	312	86		58	
96-97	211	499	64	--	43	--

PRONGHORN HERD UNIT #14 - JOHNS VALLEY**BOUNDARY DESCRIPTION**

Garfield County generally known as Johns Valley. This unit is bounded on the east by Bryce Canyon National Park and the Escalante Mountains; on the north by Antimony Creek and Forest Creek; on the west by the Mount Dutton Mountain range and the Paunsaugunt Plateau; and on the south by Tropic Reservoir and Bryce Canyon National Park.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	6,400	6
State of Utah	36,640	36
Private	7,520	7
Forest Service	51,840	51
TOTAL	102,400	100

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Antlerless Harvest	Percent Success	Permits Sold	
					Bucks	Antlerless
1991	14	13	--	93	19	--
1992	55	28	21	89	33	22
1993	82	21	52	89	27	55
1994	99	25	56	57	33	66
1995	44	23	15			
1996	13	11		85	13	0

CLASSIFICATION DATA

Year	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
	Pre	Trend	Pre	Trend	Pre	Trend
91-92	163	467	38	--	18	--
92-93	187	449	37	--	30	--
93-94	315	500	50	--	18	--
94-95	171	308	40	--	61	--
95-96	137	278	15		31	38

PRONGHORN HERD UNIT #15 - PUDDLE VALLEY**BOUNDARY DESCRIPTION**

Tooele County - Boundary begins at the junction of Highway I-80 and the Rowley (ie. AMAX Magnesium) road; then northerly on this road to the Tooele-Box Elder county line; westerly along this county line to the USPCI road; southerly on this road to I-80; easterly on I-80 to the Rowley road.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	205,000	82
State of Utah	32,500	13
Private	12,500	5
TOTAL	250,000	100

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Percent Success	Permits Sold
1992	6	5	83	6
1993	closure	--	--	--
1994	closure	--	--	--
1995	closure	--	--	--
1996	6	6	100	6

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
91-92	105	169	38	*	50	19
92-93	81	134	68	*	45	21
93-94	14	169	25	*	50	26
94-95	--	166	--	*	--	35
95-96	34	118	41	*	14	28
96-97	--	149	--	*	--	51

PRONGHORN HERD UNIT #16 - EAST BENCH**BOUNDARY DESCRIPTION**

Uintah County - Boundary begins at the White River and Utah-Colorado state line to the Uintah-Grand county line; west along this line to the Uintah and Ouray Indian Reservation boundary (Willow Creek); north and west along this boundary to the Green River; north along this river to the White River; east along this river to the Utah-Colorado state line. (Excluding all indian trust lands).

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Percent Success	Permits Sold
1992	13	12	92	13
1993	14	14	100	14
1994	14	14	100	14
1995	12	11	92	12
1996	11	7	64	11

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	59	--	35		35	
93-94	82	373	55		41	
94-95	163	422	52		60	
95-96 +	82	235	71		51	
96-97	167	--	63		70	

+ Trend count does not include any Ute Trust Land.

PRONGHORN UNIT #17 - HALFWAY HOLLOW**BOUNDARY DESCRIPTION**

Uintah and Duchesne Counties - Boundary begins at the junction of Highway US-40 and Highway US-191 in Vernal; then southeast on US-40 to Highway SR-45 (Bonanza Highway); south on SR-45 to the Green River; southwest along this river to the Duchesne river; northwest along this river to the Uinta River; northwest along this river to the US Forest Service boundary; east along this boundary to US-191; south on US-191 to US-40. EXCLUDING ALL INDIAN TRUST LANDS AND THE OURAY NATIONAL WILDLIFE REFUGE.

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Doe-Fawn Harvest	Percent Success	Permits Sold
1992	5(33)	4	23	80	5(33)
1993	4(20)	3	17	75(85)	
1994	7(46)	7	32	100(70)	7(46)
1995	8(9)	8	9	100	8(11)
1996	8 (5)	8	5	100	8 (5)

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	75	--	72		79	
93-94	100	187	58		97	
94-95	136	202	24		56	
95-96	113	193	57		65	
96-97	145	--	24		76	

PRONGHORN HERD UNIT #18 - RUSH VALLEY**BOUNDARY DESCRIPTION**

Tooele and Utah Counties - Boundary begins at Highways SR-36 and SR-73; then easterly on SR-73 to Highway SR-68; southerly on SR-68 to Highway US-6; westerly on US-6 to SR-36 and the Death Canyon road at Tintic Junction; westerly on the Death Canyon road to the junction of the Cherry Creek and Vernon Creek roads at the summit of the Sheep Rock Mountains; northwesterly along the summits of the Sheeprock and Onaqui Mountains to Highway SR-199; easterly on SR-199 to SR-36; northerly on SR-36 to SR-73.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management		
State of Utah		
Private		
TOTAL		

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Percent Success	Permits Sold
1992	6	6	100	6
1993	6	5	83	6
1994	5	5	100	6
1995	6	5	83	6
1996	6	6	100	6

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	57	76	67	*	23	33
93-94	19	119	50	*	8	29
94-95	--	101	--	*	--	12
95-96	40	109	33	*	57	60
96-97	59	153	65	*	91	19

PRONGHORN HERD UNIT #19 - SAGE HEN HOLLOW**BOUNDARY DESCRIPTION**

Beginning at Junction of U.S. 89/SR-143; westerly on SR-143 to Mammoth Creek Road; south and east on Mammoth Creek Road to U.S. 89; north on U.S. 89 to Junction of U.S. 89/SR-143, point of beginning.

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Harvest	Percent Success
			Male	
1992	5	5	5	100
1993				100
1994				100
1995	3	3	3	100
1996	3	3	3	100

CLASSIFICATION DATA

Year	Sample Size		Fawns/100 Does		Bucks/100 Does	
	Pre	Trend	Pre	Trend	Pre	Trend
93-94	22	87	62		8	26
94-95	54	87	69		17	30
95-96	41	98	68		18	26
96-97	91	132	34		60	35

PRONGHORN HERD UNIT #21 - PANGUITCH VALLEY**BOUNDARY DESCRIPTION**

Garfield and Iron Counties - Boundary begins at Panguitch, then west on Panguitch Creek to USFS boundary then north along boundary to SR-20, then east on SR-20 to US-89, then north on US-89 to Bull Rush Creek, then east on Bull Rush Creek to USFS boundary, then south on boundary to Big Hollow, then west on Big Hollow to US-89, then north on US-89 to Panguitch.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management		
State of Utah		
Private		
USFS		
TOTAL		

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Percent Success	Permits Sold
1992	6	5	83	6
1993	5	4	80	5
1994	5	5	100	5
1995	5	5	100	5
1996	2	2	100	2

CLASSIFICATION DATA

	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
Year	Pre	Trend	Pre	Trend	Pre	Trend
92-93	90	112	32	--	11	27
93-94	65	110	60	--	57	31
94-95	78	102	23	--	43	28
95-96	61	81	15		41	31
96-97	96	108	58		11	26

PRONGHORN HERD UNIT #22 - INDIAN PEAKS

Success approached 100% on both the bucks and antlerless hunts. This unit was created in 1993 by dividing the Southwest Desert unit into north and south portions. It was counted exhaustively in April 1993, and a total of 680 antelope were found, including 180 bucks. Fawn-doe classification in 1993 summer surveys yielded 50 fawns/100 does:46 bucks/100 doe were found.

This herd is undoubtedly healthy and increasing. During the next year or two, the long term goal of 1100 antelope may be attained. No range problem areas have been identified (see tables). There is a concern for depredation in agricultural areas around Garrison and Beryl. Doe permits are recommended to direct some hunters to the northern part on the unit, and to generally reduce growth. It is prudent that as the long term goal is approached it is done gradually and carefully to avoid conflicts.

Buck permits are allocated to equal 25% of the counted pre-season mature buck population.

BOUNDARY DESCRIPTION

Beaver, Iron and Millard counties- Boundary Milford and the Union Pacific Railroad tracks; then souwesterly along these tracks to the Utah-Nevada state line; north along the state line to Highway SR-21; southeasterly on SR-21 to Milford.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management		
State of Utah		
Private		
USFS		
TOTAL		

HARVEST TREND SUMMARY

Year	Hunters Afield	Buck Harvest	Percent Success	Permits Sold
1992	NEW UNIT			
1993	27(27)	26(22)	100(81)	27(27)
1994	61(55)	56(46)	92(84)	61(55)
1995	29	25		
1996	46	44	96	46

CLASSIFICATION DATA

Year	SAMPLE SIZE		FAWNS/100 DOES		BUCK/100 DOES	
	Pre	Trend	Pre	Trend	Pre	Trend
1993-1994						
1994-1995	255		17		67	
1995-1996						

1996-1997	126	380	2		42	29
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V. MOOSE

A. HISTORY OF MOOSE MANAGEMENT IN UTAH

The first recorded sighting of a moose in Utah was in 1906 or 1907. At that time, one was killed at the head of Spanish Fork Canyon. The next reported sighting was in 1918, and was of a cow and calf in the Bear River drainage on the north slopes of the Uinta Mountains. Sparse reports over the next few decades were mainly from the north slopes of the Uintas. A population was apparently very slowly building in that area. It was not until 1947 that it was determined that a year-round resident herd existed in Utah.

In the 1950-1957 period, beaver populations increased considerably on the north slopes, and moose seemed to increase concurrently and in the same areas. It is interesting to speculate that the increase of marsh areas and willow caused by beaver activity was a major contributing factor of this moose increase.

The first aerial survey specifically for moose was conducted along the north slopes in the spring of 1957. Fifty-nine moose were counted. Aerial trend counts since that time have shown a fairly uniform increase in the moose population as shown by the 1992 count of 565 animals. With the buildup of moose numbers in the Uintas, observations in other areas began to trickle in. Most notable of these satellite populations are the populations in Chalk Creek adjoining the north slopes on the west, the Ogden River and Lost Creek drainages, and further north into the Cache and Rich county areas. They, like the parent population on the north slopes, have continued to expand.

Though expansion of moose into areas peripheral to the north slopes has taken place at a fairly regular and reasonable rate, there existed suitable habitat further removed. To speed expansion into one of these areas, moose were captured on the north slopes and moved to the Fish Creek drainage on the north end of the Manti Mountain. In January and February of 1973, 18 animals were taken from the Bear river and Mill Creek drainages; and in February 1974, 10 were taken from the Chalk Creek drainage and moved to this new location. During the January-March period of 1978, 6 more were transported to this same Manti location and 12 were moved to a site in Colorado. Due to a high number of illegal kills, a viable moose herd was not established on the Manit Mountain area. Therefore, an additional 26 head were put south of Joe's Valley Reservoir and four head in the Scofield area during January 1987. During February 1988, 28 head of moose were taken from Echo Canyon and one moose from Fruit Heights and relocated near Fish Lake on the Fishlake National Forest. An additional 10 moose went to the Fishlake area in February 1989. In the same time period 12 others were relocated to the Manti Mountain and 6 went to the Current Creek area in East Wasatch County as a supplement to the existing small moose population there.

In February 1991, thirty-one moose were relocated from the South Fork of Ogden River. Ten moose were released in Current Creek, Duchesne County, and 21 went to Hill Creek on the Uintah-Ouray Reservation.

The first legal harvest of moose in Utah was sanctioned for the north slopes in 1958. Ten bull permits were issued and 7 bulls were taken. For the next 10 years, the number of available permits varied from 10 to 20, and hunters experienced success ranging from 47 percent to 87 percent. In 1967, the areas were further expanded to include all of the Chalk Creek drainage and parts of Cache, Morgan and Rich counties. As moose have continued to increase in numbers and distribution, permits have been issued in the Kamas and Uinta south slope areas.

In 1979, 77 antlerless permits were authorized for the Uinta North Slope unit. An attempt was made to return the bull/cow ratio to 1 bull for every 2 cows to see what effect various bull/cows ratios have on calf/cow ratios. Forty-eight cows and 17 calves were harvested during a November 3 to December 2 hunt.

During 1980, the Ogden River and Uinta North Slope units were divided into 4 units in order to better manage the moose resource and have more control of the location of the harvest. The Chalk Creek portion of the Uinta North Slope was separated into a unit by itself. the Ogden River unit is now comprised only of that portion of the Ogden River drainages in Weber County.

Morgan, Cache and Rich counties were divided into 2 new moose units--the Morgan-South Rich unit and the Cache-North Rich unit. In 1982, another new unit, the Uinta South Slopes, was opened to hunting for the first time. The Kamas unit was opened to hunting in 1986. Two new units, East Canyon and Heber-Diamond Fork, were opened to hunting in 1990.

The 1987 hunting season on the Chalk Creek, Morgan-South Rich and Ogden River units was in November. The Daggett, Uinta North Slope, Uinta South Slope, Cache-North Rich and Kamas units had a September season. All moose hunting units currently have a late September-October hunting season. A summary of moose permits available, hunters afield and harvest in presented in the section on moose.

Yearly Summary of Moose Harvest 1958 to Present

Year	Bulls	Antlerless	Hunters Afield	Hunter Days	% Success
1958	7		10		70
1959	5		9		55
1960	10		19		53
1961	8		14		56
1962	7		15		47
1963	9		15		60
1964	8		14		57
1965	8		15		53
1966	5		9		50
1967	13		15		87
1968	14		15		93
1969	22		25		88
1970	24		34		71
1971	32		63		51
1972	71		105		68
1973	56		101		55
1974	16		25		64
*1975	20		25		80
1976	55		60		92
1977	30	18	50		96
1978	65	16	89		91
1979	57	65	127		96
1980	81	21	118		86
1981	78	18	116		83
1982	94	0	106		89
1983	89	0	107		83
1984	113	0	130		87
1985	105	0	120		88
1986	134	15	155		96
1987	140	14	155	586	99
1988	141	26	176	638	95
1989	181	25	209	744	98
1990	192	90	283	941	99
1991	192	99	296	972	98
1992	198	100	303	823	98
1993	174	59	299		98
1994*	110	47	157		100
1995	140	16	177	1011	88%
1996	139	11	153	844	98%
TOTAL	2,564	613	3,584	4,704	89%

* Does not include PHU data

C. 1996 UTAH MOOSE HARVEST
Bull Moose Permit Harvest, 1996.

Unit	Permits	Hunters Afield	Hunter Days	Bulls	Antlerless	% Success
Cache - 02	16	16	156	16		100.0%
Chournos(PHU)-Public	3	3	9	1	2	100.0%
Chournos(PHU)-Private	2	2		2		100.0%
SJ Ranch(PHU)-Public	1					??
SJ Ranch(PHU)-Private	1					??
Ogden - 03	22	22	215	16	6	100.0%
Porcupine(PHU)-Public	6	6	44	2	3	83.3%
Porcupine(PHU)-Priv.	2	1		1		100.0%
Broadmouth(PHU)-Public	1					??
Broadmouth(PHU)-Priv.						??
Morgan-Rich - 04	6	6	75	6		100.0%
Dry Bread(PHU)-Public	1	1	1	1		100.0%
Dry Bread(PHU)-Priv.	2	2		2		100.0%
Skull Crack(PHU)-Publ.	3	3	45	3		100.0%
Skull Crack(PHU)-Priv.	4					??
Deseret(PHU)-Publ.	1					??
Deseret(PHU)-Priv.	2	2		2		100.0%
Cottonwood(PHU)-Public	2	2	4	2		100.0%
Cottonwood(PHU)-Priv.						??
Middle Ridge(PHU)-Public	1	1	4	0		0.0%
Middle Ridge(PHU)-Priv.	2	2		2		100.0%
Durst Mtn.(PHU)-Public	1					??
Durst Mtn(PHU)-Priv.	2	2		2		100.0%
Folley Ridge(PHU)-Public	2	2	6	2		100.0%
Folley Ridge(PHU)-Priv.	3	3		3		100.0%
Woodruff Crk(PHU)-Public	1					??
Woodruff Crk(PHU)-Priv.	2	2		1		50.0%
Guildersleeve(PHU)-Public	1	1	5	1		100.0%
Guildersleeve(PHU)-Priv.	1	1		1		100.0%
East Canyon - 05	5	5	20	5		100.0%
Chalk Creek - 06	8	8	29	8		100.0%
Porcupine(PHU)-Public	1					??
Porcupine(PHU)-Priv.	2	1		1		100.0%
East Fork(PHU)-Public	1					??
East Fork(PHU)-Priv.	3	3		3		100.0%
Weber/Florence(PHU)-Public	2	2	8	2		100.0%
Weber/Florence(PHU)-Priv.	4	4		4		100.0%
State Corner(PHU)-Public	1	1	3	1		100.0%
State Corner(PHU)-Priv.						??
Bear River(PHU)-Public	1	1	1	1		100.0%
Bear River(PHU)-Priv.	2	2		2		100.0%
South Fork(PHU)-Public	1	1	2	1		100.0%
South Fork(PHU)-Priv.	1	1		1		100.0%
Kamas - 07	5	5	23	5		100.0%
North Slope - 08	16	16	42	16		100.0%
Daggett - 09	8	8	30	8		100.0%
Diamond Fork - 11	3	3	41	3		100.0%
South Slope* - 12	4	4	48	4		100.0%
Currant Creek - 12	3	3	5	3		100.0%
Salt Lake-Timpanogos-17	5	5	28	5		100.0%

Unit	Permits	Hunters Afield	Hunter Days	Bulls	Antlerless	% Success
Cache - 02	16	16	156	16		100.0%
Chournos(PHU)-Public	3	3	9	1	2	100.0%
Chournos(PHU)-Private	2	2		2		100.0%
SJ Ranch(PHU)-Public	1					??
SJ Ranch(PHU)-Private	1					??
Ogden - 03	22	22	215	16	6	100.0%
Porcupine(PHU)-Public	6	6	44	2	3	83.3%
Porcupine(PHU)-Priv.	2	1		1		100.0%
Broadmouth(PHU)-Public	1					??
Broadmouth(PHU)-Priv.						??
Morgan-Rich - 04	6	6	75	6		100.0%
Sportsman Permit	1					??
GRAND TOTAL	168	153	844	139	11	98.0%

MOOSE HERD UNIT #2 - CACHE-NORTH RICH

BOUNDARY DESCRIPTION

Cache, Rich, Weber and Box Elder counties - Boundary begins at the Utah-Idaho state line and Interstate 15; then east along this state line to the Utah-Wyoming state line; south on this state line to Highway SR-16; north on SR-16 to Highway SR-39; west on SR-39 to the county road from SR-39 to Hardware Ranch (Ant Flat Road); north on the Ant Flat Road to Hardware Ranch and Highway SR-101; west on SR-101 to Highway US 89-91; southerly on US 89-91 to I-15; north on I-15 to the Utah-Idaho state line.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Private	240,600	29
Bureau of Land Management	169,500	20
Forest Service	336,100	40
Wildlife Resources	16,200	2
State Lands	78,400	9
TOTAL	840,800	100

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1992	47	27	19	--	46	96	47
1993	42	25	15	1	41	96	43
1994	17	17	0	0	17	100	17
1995	22	18	0	0	18	90	20
1996	20	18	2	0	20	100	20

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Post	Trend	Post	Trend	Post	Trend
92-93	--	--	--	--	--	--
93-94	--	121	--	49	--	84
94-95	NO DATA					
95-96	50 ¹	131	33 ¹	47	75 ¹	120
96-97	63 ¹	No Data	43 ¹	--	60 ¹	--

¹ Data collected from field observations combined with observations from deer check stations.

MOOSE HERD UNIT #3 - OGDEN**BOUNDARY DESCRIPTION**

Weber, Box Elder, Cache, and Morgan counties - Boundary begins at Hyrum; then easterly on SR-101 to the Ant Flat Road (at Hardware Ranch); southerly on this road to SR-39; westerly and southerly on SR-39 to SR-167 (the new Trappers' Loop Road); southerly on this road to I-84; westerly on I-84 to I-15; northerly on I-15 to Exit 364 and U.S.-91; easterly and northerly on U.S.-91 to SR-101; easterly on this highway to Hyrum.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1992	77	44	32	1	77	100	77
1993	53	26	22	4	52	96	53
1994*	38	17	21	--	38	100	38
1995	24	19	1		20	-	24
1996*	24	18	6		24	100	30

*NO PRIVATE PHU DATA

AERIAL TREND COUNT

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93		423		23		67
93-94		NO COUNT				
94-95	NO DATA					
95-96	NO DATA					
96-97		454		46		70

MOOSE HERD UNIT #4 - MORGAN-SOUTH RICH

BOUNDARY DESCRIPTION

Morgan, Rich and Summit counties - Boundary begins at the junction of Interstates 84 and 80 near Echo; then northeasterly on I-80 to the Utah-Wyoming state line; north along this state line to Highway SR-16; north on SR-16 to Highway SR-39 near Woodruff; west on SR-39 to Highway SR-167 (Trappers Loop Road); south on SR-167 to Highway SR-30 at Mountain Green; west on SR-30 to I-84; east on I-84 to I-80.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Private	481,000	83
Bureau of Land Management	52,800	9
Forest Service	17,300	3
Wildlife Resources	14,940	3
State	14,300	2
TOTAL	580,340	100

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1992	40	30	9	1	40	100	40
1993	69	49	16	1	66	96	69
1994*	44	41	3	--	44	100	44
1995*	37	31			31	84	37
1996*	38	36			36	95	38

* INCLUDES PHU DATA

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93		651		43		76
93-94		NO COUNT				
94-95		561		38		89
95-96		NO COUNT				
96-97						

MOOSE HERD UNIT #5 - EAST CANYON**BOUNDARY DESCRIPTION**

Morgan, Summit, Salt Lake and Davis counties- Boundary begins at the junction of Interstates 80 and 84 (Echo Junction); then south and west on I-80 to I-15; north on I-15 to I-84; east on I-84 to I-80.

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1992	5	5	--	--	5	100	5
1993	5	5	--	--	5	100	5
1994	5	5	--	--	5	100	5
1995	5	5	--	--	5	100	5
1996	5	5			5	100	5

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93						
93-94	--	107	--	64	--	73
94-95	NO DATA					
95-96	NO DATA					
96-97		126		62		90

MOOSE HERD UNIT #6 - CHALK CREEK**BOUNDARY DESCRIPTION**

Summit and Duchesne counties - Boundary begins at the junction of Interstates 84 and 80 near Echo; then northeasterly on I-80 to the Utah-Wyoming state line; south and east along this state line to Highway SR-150; south on SR-150 to Pass Lake and the Weber River Trail; west on this trail to Holiday Park and the Holiday Park road; west on this road to Highway SR-32; north and west on SR-32 to I-80 and Wanship; north on I-80 to I-84 near Echo.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Summer Private	201,200	100

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1992	69	44	20	2	66	96	71
1993	27	27	--	--	27	100	27
1994*	22	22	--	--	22	100	22
1995	26	22			22	85	26
1996	27	26			26	96	27

* NO PHU DATA

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93		366		38		49
93-94		NO COUNT				
94-95	NO DATA					
95-96		341		47		53
96-97						

MOOSE HERD UNIT #7 - KAMAS**BOUNDARY DESCRIPTION**

Summit and Wasatch counties - Boundary begins at the junction of Interstate 80 and Highway SR-32 (Wanship); then south on SR-32 to the Weber Canyon road at Oakley; east on this road to Holiday Park and the Weber River Trail; east on the Weber River Trail to Highway SR-150 near Pass Lake; south on SR-150 to the Provo-Duchesne River drainage divide; south along this drainage divide to the Wolf Creek Pass and Highway SR-35; west on SR-35 to Francis and Highway SR-32; west on SR-32 to Highway US-40 near Jordanelle; north on US-40 to I-80; north on I-80 to SR-32 and Wanship.

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1992	5	5	--	--	5	100	5
1993	5	4	--	--	4	80	5
1994	5	5	--	--	5	100	5
1995	5	5	--	--	5	100	5
1996	5	5			5	100	5

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93		76		39		69
93-94		NO COUNT				
94-95		45		45		80
95-96		NO COUNT				
96-97		51		39		83

MOOSE HERD UNIT #8 - UINTA NORTH SLOPE**BOUNDARY DESCRIPTION**

Summit County - Boundary begins at the Utah-Wyoming state line and Highway SR-150; then south on SR-150 to the Summit-Duchesne county line; east along this county line to the Burnt Fork-Sheep Creek drainage divide; north along this drainage divide to the Burnt Fork-Birch Creek drainage divide; north along this drainage divide to the Utah-Wyoming state line; west along this state line to SR-150.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service	371,840	68
Private	172,800	32
TOTAL	544,640	

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold	
		Bulls	Cows	Calves			Bulls	Antl.
1992	43	27	16	--	43	100	27	16
1993	22	22	--	--	22	100	22	0
1994	37	16	21	--	37	100	37	22
1995	38	15	16	--	31	--	16	22
1996	16	16	--	--	16	100	16	--

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend*	Pre	Trend	Pre	Trend
91-92		565		52		57
92-93						
93-94		334		51		56
94-95	NO DATA					
95-96	NO DATA	182		39		81
96-97	NO DATA					

MOOSE HERD UNIT #9 - DAGGETT**BOUNDARY DESCRIPTION**

Daggett and Summit counties - Boundary begins at the Birch creek-Burnt Fork Creek drainage divide and the Utah-Wyoming state line; then east along this state line to the Utah-Colorado Wyoming state lines (3 Corners); south along the Utah-Colorado state line to the Daggett-Uintah county line; westerly along this county line to the Daggett-Duchesne county line; westerly along this county line to the Summit-Duchesne county line; westerly along this county line to the Burnt Fork-Sheep Creek drainage divide; north along this drainage divide to the Burnt Fork-Birch Creek drainage divide; north along this drainage divide to the Utah-Wyoming state line.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Forest Service		
Bureau of Land Management		
Private		
State		
TOTAL		

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1992	5	5			5	100	5
1993	5	5			5	100	5
1994	5	5			5	100	5
1995	8	8			8	100	8
1996	8	8			8	100	8

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93	--	--	--	--	--	--
93-94	13	88	100	68	125	125
94-95	23	--	75	--	113	--
95-96	7	103	50	56	25	71
96-97	--	--	--	--	--	--

MOOSE HERD UNIT #11 - DIAMOND FORK

BOUNDARY DESCRIPTION

Utah and Wasatch Counties - Boundary begins at Highways US-6 and I-15; then northerly on I-15 to Highway SR-52; easterly on SR-52 to Highway US-189; northeasterly on US-189 to Highway US-40; southeasterly on US-40 to Forest road #308 (Main Canyon road) at Daniels Summit; southwesterly on this road to Buck Springs and the Utah-Wasatch County line; southerly along this county line to the Sheep Creek road; southwesterly on this road to US-6; northwesterly on US-6 to I-15.

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1992	2	2	--	--	2	100	2
1993	1	1	--	--	1	100	1
1994	2	2	--	--	2	100	2
1995	2	2	--	--	2	100	2
1996	3	3	--	--	3	100	3

* In 1990, the unit encompassed all of what is now the Salt Lake-Timpanogos, Diamond Fork and the westernmost portion of the South Slope unit. Hunters were free to hunt anywhere within those boundaries.

** In 1991, the unit was split into its' present configuration.

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend*	Pre	Trend*
91-92**	21		71	--	129	--
92-93						
93-94						--
94-95		13		50		13
95-96**	5		33		50	
96-97		18		60		200

* Ratios obtained during winter aerial counts should be considered as calves or bulls per 100 antlerless. Bulls have normally shed antlers at this time.

** These are incidental observations throughout the year. They do not represent any coordinated classification efforts.

MOOSE HERD UNIT #12 - UINTA SOUTH SLOPE**BOUNDARY DESCRIPTION**

Duchesne, Uintah, and Wasatch counties - Boundary begins at the Daggett-Uintah County/Colorado-Utah state line; south along the state line to Highway US-40; westerly on US-40 to Highway SR-87 at Duchesne; north on SR-87 to Highway SR-35; northwesterly on SR-35 to the Provo River-Duchesne River drainage divide at Wolf Creek Pass; north along this drainage divide to Highway SR-150; northeasterly on SR-150 to the summit of the Uinta Mountains (Duchesne/Summit and Uintah/Daggett county lines); east along this drainage divide to the Colorado/Utah state line (excluding all Ute Indian Tribal land within this boundary).

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1992	4	4	--	--	4	100	4
1993	6	6	--	--	6	100	6
1994	7	7	--	--	7	100	6
1995	7	7	--	--	7	100	6
1996	4	4	-	-	4	100	4

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93						
93-94		50		48		37
94-95						
95-96						
96-97						

MOOSE HERD UNIT #13 - CURRANT CREEK**BOUNDARY DESCRIPTION**

Duchesne and Wasatch counties - Boundary begins at Duchesne and Highway SR-87; north on SR-87 to SR-35; northwesterly on SR-35 to Francis and SR-32; SR-32 to highway US-40; south and easterly on US-40 to the Soldier Creek Dam road; then southerly along this road to the Soldier Creek Dam and the Strawberry River; easterly along this River to Duchesne and the Duchesne River. (excluding all Ute Indian Tribal land within this boundary).

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1995	3	3	--	--	3	100	3
1996	5*	5*	-	-	5*	100	5

*includes two PHU permits

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend	Pre	Trend
95-96	+	+	+	+	+	+
96-97	+	+	+	+	+	+

MOOSE HERD UNIT #17 - SALT LAKE-TIMPANOGOS

BOUNDARY DESCRIPTION

Salt Lake, Summit, Utah and Wasatch Counties - Boundary begins at Highways I-15 and I-80; then easterly on I-80 to Highway US-40; southerly on US-40 to Highway US-189; southwesterly on US-189 to Highway SR-52; westerly on SR-52 to I-15; northerly on I-15 to I-80.

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold
		Bulls	Cows	Calves			
1992	2	2	--	--	2	100	2
1993	2	2	--	--	2	100	2
1994	3	3	--	--	3	100	3
1995	3	3	--	--	3	100	3
1996	5	5	--	--	5	100	5

* In 1990, the unit encompassed all of what is now the Salt Lake-Timpanogos, Diamond Fork and the westernmost portion of the South Slope unit. Hunters were free to hunt anywhere within those boundaries.

** In 1991, the unit was split into its' present configuration.

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend*	Pre	Trend*
92-93	--	--	--	--	--	--
93-94	--	--	--	--	--	--
94-95	--	13	--	43	--	43
95-96	--		--		--	
96-97	--	30	--	63	--	113

* Ratios obtained during winter aerial counts should be considered as calves or bulls per 100 antlerless. Bulls have normally shed antlers at this time.

VI. BISON

A. HISTORY OF BISON MANAGEMENT IN UTAH

Utah's parent herd of bison was obtained from Yellowstone National Park in 1941. The herd consisted of 3 bulls and 15 cows. The release was near Robber's Roost Ranch north of the Dirty Devil River on the San Rafael Desert. An immediate dispersal of the animals, particularly bulls, took place. Some moved several miles north and northeast of the transplant site. To offset the loss, 5 more bulls were obtained from Yellowstone National Park in 1942 and released with the remaining bison near Robber's Roost Ranch. The major portion of this herd eventually moved south of the Dirty Devil River and began ranging on the Burr Desert and adjacent Henry Mountains. The first sanctioned hunt was held in 1950. A roundup of these animals to test for brucellosis occurred in November 1963, and reactors were removed from the herd during a subsequent hunt by Fish and Game employees. No positive reactors have been isolated since that time. The roundup and corralling of these animals did, however, have the effect of moving or apparently contributing to the move of the herd from the Burr Desert area to the west side of the Henry Mountains where they have since ranged.

Over the years, there was a very gradual increase of bison on this herd unit. Great recreational and utilitarian value has been provided by this herd, both from a hunting and an aesthetic standpoint.

Fifty-six either sex permits were issued for bison in 1987. Five of these permits were authorized for nonresidents and one permit was sold to the highest bidder. To distribute hunters and to maintain a quality experience for bison hunters, the season was split again in 1987. Twenty-two permits were issued for an October 3-12 hunt and thirty-three permits were issued for a November 7-28 season.

In 1988, due to an increasing bison population, 22 resident cow permits were issued for an October 7-15 hunt. In addition, 22 hunters choice permits each were authorized for November 4-17 and November 18 to December 3 respectively. One "bid" permit was also sold for \$3,701, to financially assist in the management of bison in Utah.

A complete history of bison harvest on the Henry Mountains is shown in the following table.

B. Yearly Summary of Utah's Bison Harvest

YEAR	PERMITS SOLD				HUNTERS AFIELD	HARVEST				% SUCC.
	HUNTERS			BULL		COW	CALF	TOTAL		
	BULL	H.C.	COW						TOTAL	
1950		10		10	10	6	4		10	100
1951	No Hunt									
1952	No Hunt									
1953	No Hunt									
1954	No Hunt									
1955	No Hunt									
1956	No Hunt									
1957	No Hunt									
1958	No Hunt									
1959	No Hunt									
1960	10			10	10	7	3		10	100
1961		12		12	12	8	4		12	100
1962		20		20	20	9	11		20	100
1963		14		14	14	1	6		7	50
1964	No Hunt									
1965	No Hunt									
1966		10		10	10	7	3		10	100
1967		10		10	10	4	6		10	100
1968	15			15	15	15			15	100
1969	10			10	10	8			8	80
1970	10			10	10	6			6	60
1971	15			15	15	8	2		10	67
1972	No Hunt									
1973	No Hunt									
1974		10		10	9	4	3		7	78
1975		10		10	9	7	2		9	100
1976		10		10	10	8	2		10	100
1977		10		10	10	9	1		10	100
*1978		22		22	22	11	9	1	21	95
1979		27		27	27	14	12	1	27	100
1980		27		27	27	16	6	1	23	85
1981		27		27	27	20	5	0	25	93
1982		28		**28	28	16	10	2	28	100
1983		28		**28	28	20	8	0	28	100
1984		36		**36	36	28	7	0	35	97
1985		45		**45	45	29	12	0	41	91
1986		56		**56	56	39	17	0	56	100
1987		56		**56	56	40	14	1	55	98
1988		45	22	**67	67	32	32	0	64	96
1989		45	22	**67	67	31	28	1	60	90
1990		55	129	**184	184	47	103	0	150	82
1991		70	22	**92	91	44	32	2	78	86
1992		18		18	18	17	1	0	18	100
1993		51		51	51	41	7	0	48	94
1994		24	66	90	90	20	58	2	80	84%
1995		36	66	102	102	32	44	0	76	77%
1996		48		48	48	38	7		45	94%
TOTAL	60	860	327	1247	1244	642	459	11	1112	89%

*Beginning in 1978, nonresident permits were available.

**Includes one bid permit, and beginning 1991 one sportsmans permit.

BISON HERD UNIT - HENRY MOUNTAINS

BOUNDARY DESCRIPTION

Garfield, Kane and Wayne Counties - Boundary begins at Highway SR-24 and the Dirty Devil River; then southeast along this river to the west shore of Lake Powell; south along this shore to Hall's Creek; north along Hall's Creek to the east boundary of Capitol Reef National Park; north along the park boundary to SR-24; east along SR-24 to the Dirty Devil River

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	1,246,720	94
National Park Service	16,000	2
State	50,560	4
TOTAL	1,313,280	

HARVEST TREND SUMMARY

Year	Hunters Afield	Harvest			Total	Percent Success	Permits Sold		
		Bulls	Cows	Calves			Bull	H.C.	Cow
1992	18	17	1	0	18	100		18	
1993	51	41	7	0	48	94		51	
1994	90	20	58	2	80	89		24	66
1995	102	32	44	0	76	77		36	66
1996	48	38	7	0	45	94		26	22

CLASSIFICATION DATA

Year	Sample Size		Calves/100 Cows		Bulls/100 Cows	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93	271	324	32	32	61	61
93-94	377	474	42	42	71	71
94-95		470	28	38	42	42
95-96		360	23	23	58	58
96-97		416	31	31	63	63

VII. BIGHORN SHEEP

A. HISTORY OF DESERT BIGHORN SHEEP MANAGEMENT IN UTAH

Desert bighorn are native to southeastern Utah. The earliest human inhabitants of record in this area are the basket makers who lived there until about 1300 A.D. The record they left, in the form of petroglyphs, depicts bighorn with frequency. Father Escalante, who traversed the area in 1776, mentions the bighorn in his record as does John Wesley Powell, who first floated the Colorado River through this Southern Utah in 1869. Early Mormon pioneers, the first to establish permanent homes in this area in recent times, confirmed the presence of bighorn sheep in 1879.

The area inhabited by the desert bighorn remained relatively untouched and unexploited until the 1940's and 1950's when uranium was discovered on the Colorado Plateau. It is believed that bighorn populations in the area suffered from the influx of people who came to prospect and mine this precious mineral.

Intensive efforts were made to study the desert bighorn beginning in 1965. Aerial surveys started in 1969, tend to indicate that the sheep population in western San Juan County may be slowly increasing. To take advantage of this increase, sheep have been captured from areas of surplus and moved to areas of good habitat but void of sheep. In December 1975, 4 sheep, 1 ram and 3 ewes were moved from the mouth of Gypsum Canyon to East Moody Canyon in the Escalante River drainage. This small start was bolstered in November 1976, by the relocation of 3 more rams and 9 ewes from the same source. During the period January 27-February 12, 1978, an additional 7 bighorn (2 rams and 5 ewes) were captured on the east side of Lake Powell and released in East Moody Canyon. In December 1979, 19 more sheep were transplanted from the San Juan unit. Nine ewes and 3 rams were moved to the San Rafael Swell, and 4 ewes and 3 rams were put in Westwater Canyon along the Colorado River.

During November and January of 1980-81, 20 head of sheep were moved out of Cataract Canyon, Jacobs Chair and Found Mesa and released into the Rock Creek drainage of the Kaiparowits Plateau.

During January of 1982, 46 sheep were moved out of Canyonlands National Park and relocated into 3 areas. Twelve head were released onto the Kaiparowits Plateau to bolster the previous year's transplant. Eleven head of bighorns were put onto the San Rafael Swell to supplement that area. Twenty-three sheep were released into the Maze area.

In January, 1983 twelve sheep (2 rams and 10 ewes) were captured in Canyonlands National Park and put onto the San Rafael Reef near Iron Wash.

During January of 1984, the San Rafael Reef received an additional 16 sheep (3 rams, 10 ewes, 2 ram lambs, and 1 ewe lamb) for the Potash unit. Also, 21 head were taken from Canyonlands and put into Capitol Reef National Park (3 rams, 12 ewes, 3 ram lambs, and 4 ewe lambs).

During January, 1985, 25 head of sheep were captured in Canyonlands National Park. Ten of those sheep were moved to Capitol Reef National Park, 8 head were relocated within the park, 6 head at Arches and 2 additional sheep were put into the Maze District. Three sheep were taken to the Karrville, Texas research area. Two rams and 2 ewes were donated to Hogle Zoo. Thirty head were captured in the Red Canyon-White Canyon area and relocated into the Little Rockies, making a total of 55 sheep relocated.

Forty-three sheep were captured in the Island in the Sky District of Canyonlands National Park during January 1986. Nineteen head (5 rams, 10 ewes and 4 ewe lambs) were moved to Arches National Park. eighteen sheep (3 rams, 12 ewes, 1 ram lamb and 2 ewe lambs) were relocated on the San Rafael area. Two rams and 2 ewes were moved to the Dry Rock Creek area to supplement previous released there. Two ewes were taken to Hogle Zoo for studies.

Legal hunting of desert bighorn in the state dates back to 1967. Ten mature ram permits were issued for November of that year, and all 9 permittees who hunted were successful. Ten permits were authorized for a September hunt each year through 1972; then in 1973 and 1974, the season was kept closed to protect animals carrying special radio collars placed on them to track their movements. The season was reopened in 1975 with 5 permits available; this was increased to 10 in 1976. In 1977, 20 permits were authorized for the north part of the unit and 5 permits on the south part. Ten rams were harvested during 1977.

In 1978, the San Juan Unit was further divided into 3 subunits--Cataract-Glen Canyon, Red Canyon and White Canyon. Ten permits were issued on the Cataract-Glen Canyon part, 5 permits on the Red Canyon part and 5 permits on the White Canyon portion, which resulted in 7 rams begin harvested. Three nonresident permits (one on each unit) were issued for the first time. One of the three nonresidents was successful on the Cataract-Glen Canyon part.

In 1979, the San Juan unit was divided into a north and south unit for hunting purposes with the division of the units at Dark Canyon. Ten resident and 1 nonresident permits were authorized on the north unit, and 5 resident permits were issued on the south unit. One resident and the nonresident were successful in taking a ram on the north unit. No rams were killed on the south unit. A new unit, the Potash unit, located between the Colorado and Green rivers and north of Canyonlands National Park, was open to hunting for the first time in 1979. Two resident permits were authorized on this unit and 1 ram was harvested.

During 1980, the 3 bighorn hunting units retained their same boundaries and number of permits as in 1979. Five resident and the nonresident hunter were successful in taking a ram on the North San Juan unit. Two permittees were successful on the South San Juan unit, and 1 hunter was able to take a ram on the Potash unit.

An additional permit was authorized by the Board of Big Game Control for a ram to be taken from either of the San Juan units. The permit was to go to the person submitting the highest sealed bid with a minimum bid of \$20,000. The purpose of bidding a ram permit was to raise revenue in order to continue with the desert bighorn sheep transplant program in the state. A bid for \$20,000 was received and the individual harvested a ram on the South San Juan unit after 5 days of hunting.

The same procedure was followed in 1981 through 1985 and bids of \$22,000, \$22,500, \$32,000, \$33,000 and \$27,000 respectively, were received for the four years. A ram was harvested on the south San Juan unit during each of the first four years. A ram was harvested on the south San Juan unit during each of the first four falls. A ram was taken on the Potash unit during 1985.

During 1981, the 3 hunting unit boundaries remained the same and the same number of permits were authorized as in 1980. Only 4 hunters were successful in harvesting a bighorn sheep.

During 1982, the hunting units boundaries remained the same. Five permits were authorized on the south San Juan unit, 2 on the north San Juan unit and 2 on the Potash unit. Five rams were taken on the Potash and south San Juan units.

During 1983, the hunting units boundaries and permits authorized remained the same as during 1982. five rams were taken on the South San Juan unit, 2 rams on the North San Juan unit, and 1 ram on the Potash unit. Including the ram taken on the bided permit, nine out of the ten hunters were successful.

The 1984 hunt unit boundaries remained the same with the exception of adding one unit, the Escalante river unit. None of the three permittees were successful on the North San Juan unit, two out of five were successful on the South San Juan unit and both permittees were successful on the Potash unit. Neither of the two permittees were successful on the Escalante River unit. The permittee with the bided permit was successful in taking a sheep on the South San Juan unit.

During 1986 and 1987, hunt units and boundaries remained the same as in 1984 and 1985. In 1988, two new units were opened to hunting, the Kaiparowits and the North San Rafael, with 2 permits authorized for each unit. All permittees were successful in taking rams. The North San Juan unit continued a definite decline in production and only one permit was authorized. Harvest information are in the following tables.

Because of a continuing decline in production and population, the North San Juan Unit was closed to hunting from 1989 to 1993. The bighorn sheep bid permit sold for \$20,000 in 1990, and the permittee killed a ram on the Potash Unit. The bid permit in 1992 sold for \$27,000.00 and a ram was taken on the North San Rafael unit.

The South San Juan unit closed in 1991 and remained closed to hunting in 1993.

A summary table in the desert bighorn sheep section presents the history of permits available, hunters afield and harvest for this species.

B. HISTORY OF ROCKY MOUNTAIN BIGHORN SHEEP MANAGEMENT IN UTAH

Rocky Mountain bighorn are native to the northern half of Utah. Records of early explorers describe large herds of Rocky Mountain bighorn sheep in much of the northern half of Utah. These populations were eliminated from Utah shortly after settlement, with only rare individuals being reported.

Since 1966, 305 Rocky Mountain bighorn sheep have been brought into the state of Utah and released in nine different sites (see attached Table). Best estimates indicate sheep currently exist in six of these sites with a total estimated population of 500 animals in Utah. Past mistakes required a re-evaluation of Utah's Rocky Mountain bighorn sheep program. In 1990, a decision was made to concentrate re-introduction efforts along the Green River from the North Slope of the Uinta Mountains through the Book Cliffs in suitable habitats. Five of the existing populations are found in this corridor. Utah is seeking Rocky Mountain bighorns from other States and Provinces to complete our objectives along the Green River corridor.

An opportunity, also, exists in Utah for California bighorn sheep. Twenty-three California bighorn were released on Antelope Island State Park in March of 1997. Based on historical information the distribution of California bighorn stopped at the Utah state line with our neighbors to the west and north. We currently feel that Utah has habitat available for this subspecies and has worked out an agreement with Antelope Island State Park in the Great Salt Lake to release California Bighorn Sheep with the understanding that excess animals in the future would be used to start new populations in northwestern Utah.

A summary table presents the numbers of permits available, hunters afield and harvest.

B. Yearly Summary of Utah's Desert Bighorn Sheep Harvest.

YEAR	RAM PERMITS SOLD	HUNTERS AFIELD	NO. OF HUNTER DAYS	RAM HARVEST	% SUCCESS
1967	10	9	24	9	100
1968	10	10	52	3	30
1969	10	10	55	6	60
1970	10	10	74	4	40
1971	10	10	=	1	10
1972	10	8	=	1	12
1973					
1974					
*1975	5	5	31	2	40
1976	10	10	87	4	40
1977	25	25	226	10	40
**1978					
Resident	20	20	151	6	30
Nonresident	3	3	46	1	33
1979					
Resident	17	17	214	2	12
Nonresident	1	1	21	1	100
1980					
Resident	17	17	233	8	47
Nonresident	1	1	4	1	100
Bid	1	1	5	1	100
*1981					
Resident	16	16	214	4	25
Nonresident	1	1	7	0	0
Bid	1	1	5	1	100
1982					
Resident	10	10	105	5	50
Bid	1	1	4	1	100
1983					
Resident	9	9	144	8	89
Bid	1	1	6	1	100
1984					
Resident	12	12	177	4	33
Nonresident	1	1	9	0	0
Bid	1	1	1	1	100
1985					
Resident	13	13	98	10	77
Nonresident	1	1	24	1	100
Bid	1	1	2	1	100
1986					
Resident	12	12	84	9	75
Nonresident	1	1	21	1	100
Bid	1	1	7	0	0
1987					
Resident	10	10	94	5	50
Nonresident	1	1	3	1	100
Bid	1	1	1	1	100
1988					
Resident	13	13	116	10	77
Nonreside	1	1	5	1	100
Bid	1	1	1	1	100
1989					
Resident	10	10	120	8	82
Nonreside	1	1	5	1	100
Bid	1	1	1	1	100

B. Yearly Summary of Utah's Desert Bighorn Sheep Harvest. B. Cont.

YEAR	RAM PERMITS SOLD	HUNTERS AFIELD	NO. OF HUNTER DAYS	RAM HARVEST	% SUCCESS
1990					
Resident	13	13	105	10	77
Nonresident	1	1	1	1	100
Bid	1	1	1	1	100
1991					
Resident	***1 10	***1 10	***4 145	***1 7	***100
Nonresident	1	1	8	1	100
Bid	1	1	1	1	100
1992					
Resident	***1 9	***1 9	***3 67	***1 8	***100
Nonresident					
Bid	1	1	1	1	100
1993					
Resident	15	15	135	15	100
Nonresident	1	1		1	
Bid	1	1		1	
1994					
Resident	***1 15	***1 15		***1 14	94
Nonresident	2	2		2	100
Bid	1	1		1	100
1995					
Resident	***1 27	27		27	100
Nonresident	3	3		3	100
Bid	1				
1996					
Resident	***1 25	***1 25	219	25	100
Nonresident	2	2	17	2	100
Bid	1	1		1	
TOTAL	388	405	2948	399	99%

* Beginning in 1975, the permit fee was increased to \$100 and had to accompany the application. In 1981 the permit fee was increased to \$200.

** Beginning in 1978, Nonresident permits were available.

***Sportsman's permittee authorized by the board.

C. 1996 UTAH DESERT BIGHORN HARVEST

Table 2. Desert Bighorn Sheep Harvest, 1996.

Unit	Number of permits	Hunters Afield	Number of Hunter Days	Ram Harvest	% Success
North San Juan		NO	HUNT		
South San Juan	1	1	11	1	100%
Potash	3(2)	3(2)	39(?)	3(2)	100%
Escalante	7	7	32	7	100%
North San Rafael	6(1)	6(1)	42(?)	6(1)	100%
South San Rafael	7	7	71	7	100%
Kaiparowits	3	3	41	3	100%
TOTAL	27	27	236	27	100%

() conservation permit data

D. 1996 UTAH ROCKY MOUNTAIN BIGHORN SHEEP HARVEST

Table 4. Rocky Mountain Bighorn Sheep Harvest, 1996.

Unit	Number of permits	Hunters Afield	Number of Hunter Days	Ram Harvest	% Success
Rattlesnake	2	2	6	2	100%
Pilot Mtn.	1	1	6	0	0%
Uinta Mtns Sheep Crk/Hoop Lake	1	1	11	1	100%
Uinta Mtns Bear Mtn	1	1	5	1	100%
TOTAL	5	5	28	4	80%

Bided permit - in addition to the 5 permits authorized by the Board of Big Game Control for the three units, an additional permit was authorized and advertised for bidding. A bid meeting the minimum qualifications was received, and the permittee harvested a ram.

Sportsman permittee - No sportsman permit was authorized to hunt in 1996.

DESERT BIGHORN SHEEP #2 - SOUTH SAN JUAN**BOUNDARY DESCRIPTION**

San Juan Counties - Boundary begins at Lake Powel and the Mouth of Dark Canyon; then due east to the north rim of Dark Canyon; east along the rim to the Elk Ridge Road; south along ridge to Bears Ears; south to Highway SR-95; west on SR-95 to SR-263; west on SR-263 to the east shoreline of Lake Powel; northeast along shoreline to mouth of Dark Canyon.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
National Park Service		
Bureau of Land Management		
State Lands		
TOTAL		

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Ram Harvest	Percent Success
1992	no hunt			
1993	no hunt			
1994	1	1	1	100
1995	1	1	1	100
1996	1	1	1	100

CLASSIFICATION DATA

Year	Sample Size		Lambs/100 Ewes		Rams/100 Ewes	
	Pre	Trend	Post	Trend	Post	Trend
92-93		64				
93-94		83		44		44
94-95		77		42		51
95-96	no survey			32		56
96-97		104	22		52	

DESERT BIGHORN SHEEP #3 - POTASH**BOUNDARY DESCRIPTION**

Grand and San Juan Counties - Boundary begins at the Green River and Interstate 70; then east along I-70 to Highway U.S. 163; south along U.S. 163 to the Colorado River; southwest along river to Canyonlands National Park boundary; west along boundary to the Green River; north on river to I-70.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management		
State Lands		
National Park		
TOTAL		

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Ram Harvest	Percent Success
1992	3	3	3	100
1993	3	3	3	100
1994	4	4	4	100
1995	3	3	3	100
1996	5	5	5	100

CLASSIFICATION DATA

Year	Sample Size		Lambs/100 Ewes		Rams/100 Ewes	
	Post	Trend	Post	Trend	Post	Trend
92-93		109		36		38
93-94		143		68		118
94-95		75		54		114
95-96		114		55		87
96-97		116		44		98

DESERT BIGHORN SHEEP #4 - ESCALANTE RIVER**BOUNDARY DESCRIPTION**

Garfield and Kane Counties - Boundary begins at the town of Boulder and the Burr Trail; then easterly along the Burr Trail to the east boundary of Capitol Reef National Park, southerly along this boundary to Hall Creek, southerly along this creek to Lake Powell; southeasterly along Lake Powell to the Escalante-Hole-in-the-Rock Road; northwesterly along this road to Highway SR-12; northeasterly along SR-12 to Boulder.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
National Recreation Area	395,400	50
Bureau of Land Management	303,300	38
State Lands	62,200	8
National Park	33,200	4
Private	2,700	
TOTAL	796,800	100

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Ram Harvest	Percent Success
1992	3	3	2	67
1993	4	4	3	75
1994	3	3	2	66
1995	7	7	7	100
1996	7	7	7	100

CLASSIFICATION DATA

Year	Sample Size		Lambs/100 Ewes		Rams/100 Ewes	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93		70		25		69
93-94		79		41		91
94-95		158		42		64
95-96		142		56		70
96-97		126		49		72

DESERT BIGHORN SHEEP #5 - NORTH SAN RAFAEL**BOUNDARY DESCRIPTION**

Emery County - Boundary begins at Castle Dale; then east on the Castledale - Woodside Road to Highway U.S. 6-191 south on U.S. 6-191 to interstate 70; west on I-70; west on I-70 to Highway SR-10; north on SR-10 to Castledale-Woodside Road.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management		
National Park Service		
State		
TOTAL		

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Ram Harvest	Percent Success
1992	3	3	3	100
1993	3	3	3	100
1994	4	4	4	100
1995	12	12	12	100
1996	7	7	7	100

CLASSIFICATION DATA

Year	Sample Size		Lambs/100 Ewes		Rams/100 Ewes	
	Post	Trend	Post	Trend	Post	Trend
92-93		144		50		82
93-94		152		58		80
94-95		224		38		93
95-96		190		45		84
96-97	no survey					

DESERT BIGHORN SHEEP #6 - KAIPAROWITS**BOUNDARY DESCRIPTION**

Boundary begins at Lake Powell and Last Chance Bay; then northwesterly along this bay to the mouth of Croton Canyon; then northerly along Croton Canyon to Rogers Canyon then up Rogers Canyon to the Straight Cliffs; northeasterly to the Hole-in-the-Rock road; southeasterly on this road to Lake Powell; southwesterly along this lake to Last Chance Bay.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management		
National Park Service		
State		
TOTAL		

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Ram Harvest	Percent Success
1992	2	2	2	100
1993	3	3	2	66
1994	2	2	2	100
1995	3	3	3	100
1996	3	3	3	100

CLASSIFICATION DATA

Year	Sample Size		Lambs/100 Ewes		Rams/100 Ewes	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93		36		53		87
93-94		33		47		47
94-95		75		47		88
95-96		40		32		79
96-97						

DESERT BIGHORN SHEEP #7 - SOUTH SAN RAFAEL**BOUNDARY DESCRIPTION**

Emery and Wayne Counties - Boundary begins at the junction of I-70 and SR-24; south along SR-24 to Hanksville; west along SR-24 to the east boundary of Capitol Reef National Park; north along this boundary to the Emery-Sevier County line; north along this line to I-70; east along I-70 to SR-24.

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Ram Harvest	Percent Success
1993	4	4	4	100
1994	5	5	5	100
1995	7	7	7	100

CLASSIFICATION DATA

Year	Sample Size		Lambs/100 Ewes		Rams/100 Ewes	
	Post	Trend	Post	Trend	Post	Trend
1992		73		36		67
1993		129		53		100
1994		224		38		93
1995		243		50		81
1996		no survey				

ROCKY MOUNTAIN BIGHORN SHEEP #1 RATTLESNAKE**BOUNDARY DESCRIPTION**

Boundary begins at the town of Green River; then north along the Green River to the Uintah Ouray Indian Reservation boundary; east and south along this boundary to Sego Canyon; south along Sego canyon to Thompson Canyon; south along Thompson Canyon to Interstate 70; west on I-70 to Green River.

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Ram Harvest	Percent Success
1992	3	3	3	100
1993	3	3	3	100
1994	3	3	3	100
1995	3	3	3	100
1996	3	3	3	100

CLASSIFICATION DATA

Year	Sample Size		Lambs/100 Ewes		Rams/100 Ewes	
	Post	Trend	Post	Trend	Post	Trend
92-93		97		41		67
93-94		110		56		73
94-95		104		80		80
95-96		82		67		82
96-97	no survey					

ROCKY MOUNTAIN BIGHORN SHEEP #2 - DEEP CREEK MOUNTAINS

BOUNDARY DESCRIPTION

Tooele and Juab Counties - Boundary begins at the Pleasant Valley road and the Utah-Nevada State line; then northerly along this state line to the Salt Springs (Blue Lake) road; southerly on this road to the Pleasant Valley road; northwesterly on this road to the Utah-Nevada state line.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Area (acres)	Percent
Bureau of Land Management	153,497	77
Goshute Indian Reservation	20,106	10
Private	4,956	2
State	21,640	11
TOTAL	199,700	100

HARVEST TREND SUMMARY

This population has never been hunted and as of August 1997 may be extirpated. The last reported sighting was in 1993.

VISUAL CLASSIFICATION DATA

Date	Uncl.	Lambs	Male	Female	TOTAL	Location
02-23-90		2	1	5	9	Lime Mountain
02-24-90		3	1	5	9	Lime Mountain
02-24-90		3	1	7	11	Trough Springs
05-08-91			1	3	4	Lime Mountain
10-10-91				3	3	Red Cedar Springs
12-91				2	2	Birch Creek
1992	4			4	8	Birch Creek
1993	20-30					Red Mountain
1994	0	0	0	0	0	
1995	0	0	0	0	0	
1996-97	0	0	0	0	0	

ROCKY MOUNTAIN BIGHORN SHEEP #3 - UINTA MOUNTAINS

BOUNDARY DESCRIPTION

Boundary Description: Daggett and Summit Counties - Boundary begins at the Utah-Wyoming-Colorado state lines (Three Corners); then west along the Utah-Wyoming state line to Highway SR-150; then south on SR-150 to the summit of the Uinta Mountains (Duchesne and Summit County line); east along this summit to the Daggett and Uintah County line; east along this line to the the Utah-Colorado state line; north along this state line to Utah-Wyoming-Colorado state line (Three Corners).

HARVEST TREND SUMMARY

Year	Hunters Afield	Rams	% Success	Permits
1992	0	0	--	0
1993	3	3	100	3
1994	3	3	100	3
1995	3	2	67	3
1996	2	2	100	2

BARE TOP CLASSIFICATION SUMMARY

Year	SAMPLE SIZE			LAMBS/100 EWES			RAMS/100 EWES		
	Pre	Trend	Spr	Pre	Trend	Spr	Pre	Trend	Spr
91-92	--	--	--	--	--	--	--	--	--
92-93	13	52	51	30	31	38	0	48	58
93-94	15	--	--	20	--	--	30	--	--
94-95	27	53		50	39		43	32	
95-96	26	43 *	--	85	88	--	15	65	--
96-97	57	49		62	52		35	44	

* Partial count

**SHEEP CREEK
CLASSIFICATION SUMMARY**

	SAMPLE SIZE			LAMBS/100 EWES			RAMS/100 EWES		
Year	Pre	Trend	Spr	Pre	Trend	Spr	Pre	Trend	Spr
91-92	--	--	--	--	--	--	--	--	--
92-93	38	38	--	74	20	--	26	32	--
93-94	39	39	34	65	65	65	30	30	18
94-95	47	47	--	61	61	--	7	7	--
95-96	15	31	--	44	13	--	22	81	--
96-97	22	17		54	25		15	88	

**HOLE-IN-THE-ROCK
CLASSIFICATION SUMMARY**

	SAMPLE SIZE			LAMBS/100 EWES			RAMS/100 EWES		
Year	Pre	Trend	Spr	Pre	Trend	Spr	Pre	Trend	Spr
90-91									
91-92									
92-93									
93-94									
94-95									

VIII. ROCKY MOUNTAIN GOAT

A. HISTORY OF ROCKY MOUNTAIN GOAT MANAGEMENT IN UTAH

There is no evidence that Rocky Mountain Goats have lived in Utah in the immediate historic past. However, there is prehistoric evidence that goats once lived in Utah.

Several areas in Utah have been identified which contain suitable habitat for goats. It is likely, that the absence of Rocky Mountain goats in Utah in recent years is due to a lack of continuous habitat which would have allowed them to migrate back into Utah.

Several states and providences which have Rocky Mountain goats were contacted to see if they had available goats for transplanting into Utah. In 1967, 2 yearling male and 4 adult female goats were obtained from the Cascade Range in the State of Washington. These 6 animals were put on the north side of Little Cottonwood Canyon near the Twin Peaks area.

Only sporadic sightings of these goats were reported until the early 1970's when goats were observed in the Coalpit and Hogum Fork area of Little Cottonwood Canyon. Soon after that, goats were observed wintering on the south side of Little Cottonwood Canyon near its mouth. The largest concentration of goats seem to be wintering in the Coalpit Gulch-Bells Canyon area and moving to adjacent higher elevations to summer. During the summer of 1981, the goat population in that area was estimated to be about 60 animals.

During July 1981, 10 goats were obtained from Olympic National Park and put onto Mt. Timpanogos. They explored and used much of the mountain during the summer and fall seasons and then moved to the south end for the winter. An additional 10 head of goats were received from Olympic National Park during June of 1982. These animals, 3 males, 4 females and 3 kids, were put on mount Olympus in the Neffs Canyon area.

During July 1986, six Rocky Mountain goats (5 female and 1 yearling male) were captured using a net gun and helicopter in the Lone Peak area and moved to the Tushar Range of central Utah. In September, a mature male goat was tranquilized on Mount Timpanogos and moved to the Tushar Range to increase the probability of successful breeding in December. All seven animals were released in the Mount Holly area but soon scattered throughout the available habitat.

During June 1987, eight Rocky Mountain goats (6 female and 2 male) were captured using a net gun and helicopter in the Lone Peak area and moved to the Bald Mountain area in the western portion of the Uinta Mountain range.

Utah's first Rocky mountain goat season was held in September 1981. The Board of Big Game Control authorized 1 permit for a mature goat in the area between American Fork and Little Cottonwood Canyons. A mature male goat was taken in the area of Box Elder Peak.

Utah's eleventh Rocky Mountain goat hunt was held on the Lone Peak unit and had four permits authorized. The Timpanogos unit which was opened for hunting for the first time in 1989, also had one permit for a mature goat. In addition, the Bald Mountain unit was opened to hunting for the first time in 1991 with one permit. Out of the six total permits sold, three adult males were taken.

Utah's twelfth Rocky Mountain goat hunt was held on the Lone Peak unit with four permits authorized. The Timpanogos unit also had one permit for a mature goat. In addition, the Bald Mountain unit had one permit. The Box Elder Peak and Tushar units had one permit each issued for the first time in 1992. Out of the eight total permits sold, eight adult males were taken.

In 1993 only three permits were authorized for Lone Peak, while the remaining units continued to have one permit each. All permittees were successful in taking a mountain goat. Goat populations continued to increase or appear stable. A summary table presents the number of permits available, hunters afield and harvest of Rocky Mountain Goats in Utah.

B. YEARLY SUMMARY OF UTAH'S ROCKY MOUNTAIN GOAT HARVEST

YEAR	Total Permits Sold	Hunters Afield	No. Of Hunter Days	HARVEST		% Succ.
				Males	Females	
1981	1	1	2	1	0	100
1982	1	1	2	0	1	100
1983	3	3	13	3	0	100
1984	4	4	16	2	1	75
1985	3	3	26	3	0	100
1986	4	4	15	2	2	100
1987	4	4	14	3	1	100
1988	4	4	15	3	1	100
1989	5	5	18	4	1	100
1990	6	6	29	4	0	67
1991	6	6	42	3	3	100
1992	8	8	46	8	0	100
1993	7	7	30	6	1	100
1994	10	10		10		100
1995*	12	12		10	2	100
1996*	19	19	79	16	2	95%

*Includes one "conservation permit"

B. 1996 UTAH ROCKY MOUNTAIN GOAT HARVEST

Table 3. Rocky Mountain Goat Harvest, 1996.

Unit	Permits issued	Hunters Afield	Days Afield	Males Harvested	Females Harvested	% Success
Lone Peak	5	5	20	4	1	100%
Box Elder Peak	4	4	14	4		100%
Timpanogos	5	5	17	5		100%
Tusher	1	1		1		100%
Bald Mountain	2	2	20		1	50%
Provo Peak	1	1	1	1		100%
TOTAL	18	18	72	15	2	94%

Does not include one "conservation permit"

ROCKY MOUNTAIN GOAT HERD #1 - LONE PEAK

BOUNDARY DESCRIPTION

Utah and Salt Lake Counties - boundary begins at Highways I-15 and I-80; then easterly on I-80 to the Salt Lake-Summit county line; southerly along this county line to the Salt Lake-Wasatch county line; southerly along this county line to the Utah-Wasatch county line; southerly along this county line to the Snake Creek-North Fork American Fork Canyon road at "Poleline Pass"; westerly on this road to Highway SR-92; westerly on SR-92 to I-15; northerly on I-15 to I-80.

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Harvest		Percent Success
			Male	Female	
1992	5	5	5	0	100
1993	4	4	4	0	100
1994	6	6	6	0	100
1995	7*	7	6	1	100
1996	9	9	8	1	100

* includes "conservation permittee"

CLASSIFICATION DATA

Date	Billie	Nannie	Kid	Unclassified Adults	Unclassified	TOTAL
January 1989	9	20	20		11	60
Jan/Feb 1991	7	7	5		17	36
January 1992	5	19	9		--	33
February 1993	--	22	11		12	45
August 1993	28	56	28		0	112
Jun-Aug 1994	--	2	11		67	80
August 1995	--	--	7		29	36
September, 1995	12				58	70
February 1996	7	17	14	4	62	101
Summer 1996			77	150		227

ROCKY MOUNTAIN GOAT HERD #2 - MT. TIMPANOGOS**BOUNDARY DESCRIPTION**

Utah County - Boundary begins at Highways SR-92 and SR-146; then easterly and southerly on SR-92 to Highway US-189; southwesterly on US-189 to Highway SR-52; westerly on SR-52 to Highway US-89; northerly on US-89 to SR-146; northerly on SR-146 to SR-92.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Summer Range	Winter Range

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Harvest		Percent Success
			Male	Female	
1991	1	1	1	--	100
1992	1	1	1	--	100
1993	1	1	1	--	100
1994	2	2	2	--	100
1995	2	2	2	--	100
1996	5	5	5	--	100

CLASSIFICATION DATA

Date	Billie	Nannie	Kid	Unclassified Adults	Unclassified	TOTAL
July 15, 1990	9	13	12		--	34
July 20, 1990	14	26	13		--	53
July 10, 1991	10	20	10		--	40
Aug. 16, 1991	11	24	14			49
Feb. 26, 1992	--	--	10		27	37
1993 Aug. 18,	13	48	15		--	76
Aug. - Nov., 1994	2	10	5		79	96
November, 1994	--	10	5		--	15
Aug.-Sept., 1996			21	58		79
July, 1997					84	84

ROCKY MOUNTAIN GOAT HERD #3 - TUSHAR**BOUNDARY DESCRIPTION**

Utah County - Boundary begins at Interstates 70 and 15; then easterly on I-70 to US-89; southerly on US-89 to Highway SR-20; westerly on SR-20 to 1-15; north on 1-15 to

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Summer Range	Winter Range

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Harvest	Percent Success
			Male	
1991				
1992	1	1	1	100
1993	1	1	1	100
1994	1	1	1	100
1995	1	1	1	100
1996	1	1	1	100

CLASSIFICATION DATA

Year	Sample Size		Kid/100 Goats		Billies/100 Nannies	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93	29		29		64	
93-94	29		45		64	
94-95	46		64		36	
95-96	59		44			
96-97						

ROCKY MOUNTAIN GOAT HERD #4 - BALD MOUNTAIN - HAYDEN PASS**BOUNDARY DESCRIPTION**

Summit, Wasatch and Duchesne Counties - Beginning at Highway 150 in Kamas; easterly on this road to the Soapstone Road (Forest Road 037); on this road to Soapstone Creek; up this creek to its confluence with Iron Mine Creek; down Iron Mine Creek to the Duchesne River; north along this river to Shale Creek; up Shale Creek to its confluence with Rock Creek; along Rock Creek-Duchesne and Rock Creek-Bear River divide to the head of the Left Hand Fork of the East Fork of Bear River; down the East Fork of the Bear River to Highway SR-150; south on this road to the Whitney Road (Forest Service Road 032); west on this road to the West Fork of Bear River; south along the West Fork to its confluence with the Dry Fork of the Weber River; down the Dry Fork of the Weber River to Highway SR-213 near Holiday Park; west on SR-213 to Highway SR-32 in Oakley; south on SR-32 to SR-150 in Kamas.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Summer Range	Winter Range

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Harvest		Percent Success
			Male	Female	
1992	1	1	1	--	100
1993	1	1	1	--	100
1994	1	1	1	--	100
1995	1	1	--	1	100
1996	2	2	--	1	50

CLASSIFICATION DATA

Year	Sample Size		Kid/100 Goats		Billies/100 Nannies	
	Pre	Trend	Pre	Trend	Pre	Trend
92-93						
93-94						
94-95						
95-96						
96-97	8		50		50	

ROCKY MOUNTAIN GOAT HERD #5 - PROVO PEAK

BOUNDARY DESCRIPTION

Utah County - Boundary begins in Springville and the Hobble Creek road; then easterly on this road to the Left Fork of Hobble Creek road; northeasterly on this road to the Berryport canyon trail; northerly on this trail to the South Fork of Provo Canyon; northwesterly along this canyon to the South Fork of Provo Canyon road; northwesterly on this road to Highway US-189; southeasterly on US-189 to Highway US-89 in downtown Provo; southeasterly on US-89 to Springville.

BACKGROUND

This Mountain Goat population results from a transplant of 5 female and 2 male goats from Olympic National Park in July of 1989. This group was augmented by an additional 4 females and 1 male from Mount Timpanogos in 1990. In addition, a mature male with an identifiable ear tag (# 110) migrated to this area from the Bald Mountain area on the west end of the Uinta Mountains. This animal was seen several times at very close distance and positively identified. One female from Washington immediately left the area and took up residence on Spanish Fork Peak to the south where she has remained ever since.

RANGE AREA AND APPROXIMATE OWNERSHIP

Ownership	Summer Range	Winter Range

HARVEST TREND SUMMARY

Year	Permits Sold	Hunters Afield	Harvest		Percent Success
			Male	Female	
1995	1	1	1	--	100
1996	1	1	1	--	100
1997					

CLASSIFICATION DATA

Date	Billie	Nannie	Kid	Unclassified Adults	Unclassified	TOTAL
1991	2	7	5		12	26
1994					27	27
1995					33	33
1996					29	29
1996					37	37